Appendix-V

TITLE OF THE STUDY

"A Comparative Study on the Achievements of same batch of Students in HS Examination compare to the Madhyamik under TBSE in Tripura State."

A DISSERTATION Submitted
To
Indira Gandhi National Open University
for the Degree of

MASTER OF ARTS (EDUCATION)

Submitted By
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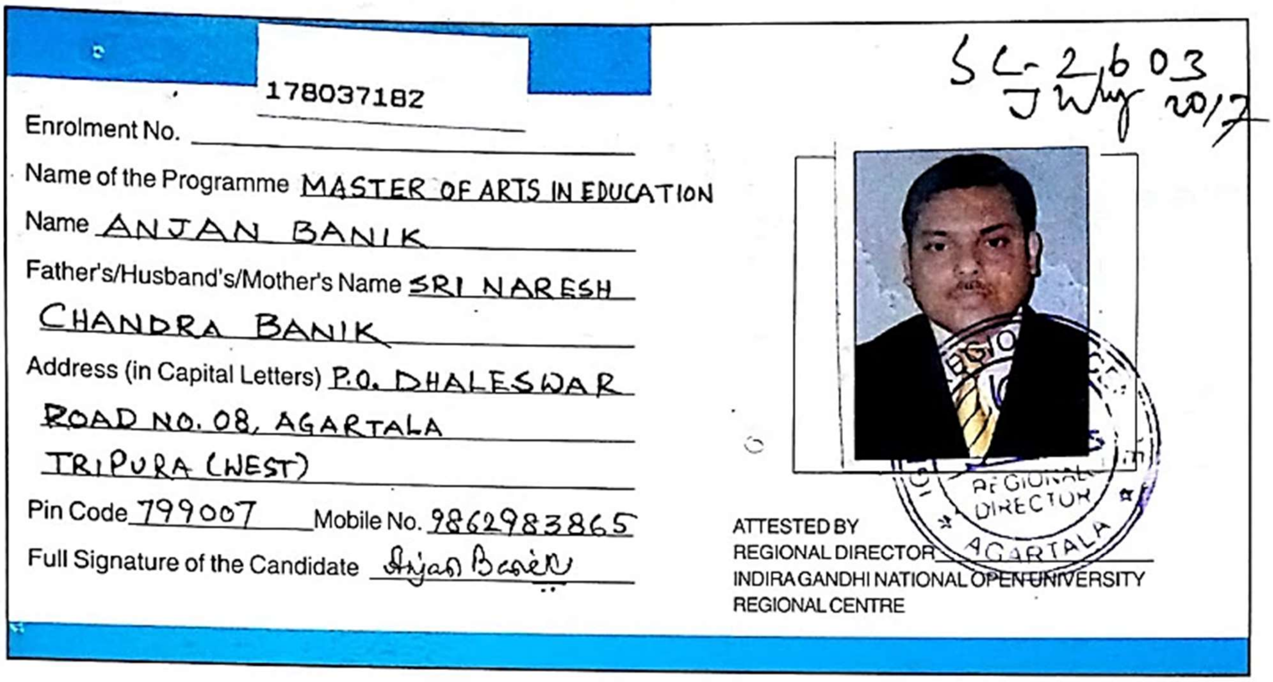

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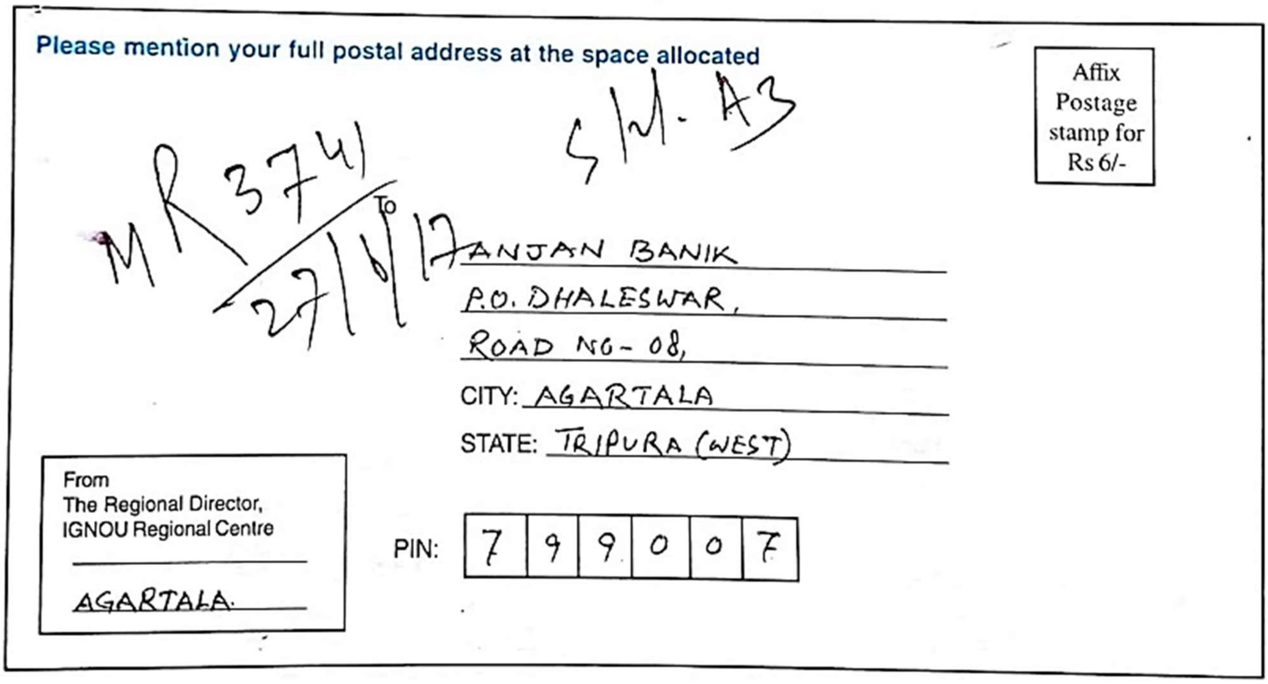

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Appendix – VI & VII

DECLARATION

I, **Anjan Banik,** (Asst. Teacher Under Directorate of Secondary Education, Govt. of Tripura), **Student** of **M.A. in Education, 2nd year (Enrolment No. 178037182)** under **Indira Gandhi National Open University,** declare that the research work on title as "**A Comparative Study on the Achievements of same batch of Students in HS Examination compare to the Madhyamik under TBSE in Tripura State**" is my original work, which has not been presented or submitted for any other Degree to any University.

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This is to certify that the Dissertation entitled as **"A Comparative Study on the Achievements of same batch of Students in HS Examination compare to the Madhyamik under TBSE in Tripura State"** *Submitted by* ***Sri Anjan Banik,*** *Assistant Teacher under Directorate of Secondary Education & Posted at Ananda Nagar HS School, Sadar, Who is the Student of* ***M.A. in Education, 2nd year*** *and Bearing the* ***Enrolment No. 178037182*** *under the* ***IGNOU Study Centre IASE – 2603P*** *to the* ***IGNOU Agartala RC*** *in fulfilment of the requirements of the Degree of M.A. in Education is a record of bonafide research work carried out by him under my guidance and supervision.*

No part of this study has been submitted for any other degree to any University.

Manimoy Pal
Assistant Professor
Institute of Advanced Studies in Education

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Researcher
Name: **Anjan Banik**

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List of Abbreviations

TBSE	Tripura Board of Secondary Education
IGNOU	Indira Gandhi National Open University
CBSE	Central Board of Secondary Education
NCF	National Curriculum Framework
NEP	National Education Policy

Chapter I – Introduction – THE PROBLEM

1.1 INTRODUCTION

Education is the complex critical and broad spectrum multi-dimensional process of facilitating learning through various method of teaching towards development in understanding, gathering of knowledge, achieving the skill, and implementing the application of the knowledge, or the acquisition of knowledge, skills, values, beliefs, and habits. Education frequently takes place under the guidance of educators; however, learners may also educate themselves. Education can take place in formal or informal settings and any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational. Education is one of the most potential interactive known process for development of the society through even reducing inequality, discriminations, poverty among human beings. Education can change the whole world as plays a very vital role for the development of any society as well as for a nation also.

"**Education**", as defined by Mahatma Gandhi-ji, "is that which draws out and stimulates the spiritual, intellectual and physical faculties of the children." Gandhi-ji remarked, "By education, I mean an all-round drawing out of the best in child and man – body, mind and spirit. Literacy is not the end of education, nor even the beginning. It is one of the means whereby man and woman can be educated. Literacy in itself is no education."

Albert Einstein describes, Education is not the learning of facts, but the training of the mind to think. So, examination may not reveal the actual learning trends of the students but may be indicate the direction of the educational system for the cause of the students' fate. The examination and its result may also depict the status of this important critical sector. The examination also identifies the processing errors of the system and its implementation apart from suggesting the outcomes towards the improvement of the whole educational system and he teaching-learning process too. So, Examinations are the tools to induce required changes in the formal educational systems.

Education is essential for the development of the society. Education reflects the social pattern of the society. The individual is regarded as endowed with a social nature. He is social by instinct. An individual seems always to be caught up in an intricate web of social relations. The social process and the educational process are essentially one and the same. Education, therefore, must aim at social development. The more educated people in a society, can ensure the more civilized and well-disciplined the society might be.

Education is essential for the development of society. The more educated the people of a society are, the more civilized and well-disciplined the society might be. Mainly, family has responsibility to socialize children for making them productive members of society. The more the parents involve in the process of imparting education to their children, the more the children might excel in their academic career and to become the productive and responsible members of society.

Education is an important parameter with which we rank a nation. The world considers those nations developed who made remarkable achievement in Science and technological field. Education is a powerful instrument with which desirable change can be made in a society (Education Commission 1964-66). The education in India is imparted in the classrooms. The classrooms are nothing but a place where the future of a nation gets furnished. The most important asset of a nation is her child. Children are considered as a nation builder. They are foundation of a nation. To dream of a strong and well-developed nation, it is mandatory to make its foundation i.e. children stronger enough.

The Educational System, through being well-balanced, can only be acquired the strength and offer a strengthen society. A balanced educational system is a system, which has all its subjects" weightage in a right proportion. It is observable that developed nations made so by laying more stress on scientific education. We can also gain the same status by motivating our children to positively pay respect towards Science subject.

Science Education is a mode to address global requirements, therefore it is important to expand its understanding, identify issues related to its expansion and seek solutions for promoting science education at the foundation levels (Bybee, 1997). This thinking has led to broadening viewpoints among many professionals and policy makers in investing science teaching and education in many countries, thus in present times education in science begins at primary levels and Pakistan is no exception. From classes 1 through 8 it is offered as a compulsory subject called general science, whereas at secondary level (9th and 10th classes), science is partitioned into general and natural sciences, offered as elective courses. The estimated school time assigned to these sciences is 12-14% of the total school time, which is rather low. At these class levels, natural science is a mix of biology, chemistry and physics and includes topics on life, animals, matter, forces, earth and the universe (Aly 2007).

Science Education is concerned with the developing of technologically literate citizens who understand how science, technology, and society influence one another and who are able to use this knowledge in their everyday activities. Rein & Beach (1997) state the rationale of science education as follows; a study on science education and learners achievement especially on the basis of Board Examination is important because it has the potential for improving the quality of life and making the world safer, empowers people, giving them greater control over their lives by providing path ways for finding answers to questions. Such study also acts as a directive of science education and its outcome as well as learners acceptance. Science Education is also the field concerned with sharing science content and process, and the application of science and have transformed the world through dramatic advances in almost all fields including medicine, engineering, electronics, aeronautics etc. And in more recent times dramatic leaps in computer technology have revolutionized in particular the information and communications sector (Hallinan and Sorensen, 1987).

Assessment in Education is an essential part and the potent strategic tool for enhancing teaching and learning, where examinations play pivotal role. Assessment is the final stage and an integral part in teaching-learning process towards students learning against the three phases of process identified as

Planning teaching-learning activities, Organizing learning experiences, and assessment of student learning. In the process of assessment, evaluation has been done to categories the student's learning performance and to interpret, analyse, rank-order, and compare one's individual score with the average score of the batch. It finds one's relative position in a group. Towards the evaluation, assessment is the mean to understand the learning outcome. An assessment requires a reference that is used for comparison.

Gage and Berliner (1991) defined assessment as a part tool of *evaluation process of collecting, interpreting and synthesizing information in order to make decisions*. Assessment also refers to the measurement process of the accrued learning. Educationist use the term *achievement* to connote what a learner knows and what s/he can do after instructions. Assessment is made of those behaviors that a learner is expected to exhibit after undergoing instructions. Here, assessment is directly linked with learning as it reflects the learning outcome of the students. In the formal educational system, the Madhyamik after 10th class and there after the Higher Secondary (+2 Stage) are the respectively vital qualitative assessment of the students which ultimately revealed the learning outcome of the student batch and gives a definite feedback on the formal schooling too.

Madhyamik Examination is the ever-first evaluation or post instructional summative assessment for certification of a candidate student through the public examination after a decade long study & learning period of 10 years of formal education after both elementary & secondary level and also accountable to the 15 years of life experiences.

Higher Secondary Examination is the second evaluation of a candidate student through the public examination after the schooling phase of 12 years of formal education and even after the Madhyamik or after the 15 years of life experiences.

Batch wise Result Analysis may depict the realistic scenario of the education system and the learning outcome. Basically, education is considered as major indicator of development of any society or any individual. Academic achievement of the students is considered as one of the prime components to judge capacity and potentiality of someone. In modern era of all-round development, the academic achievement plays an important role in complete development of each and every individual to be citizens and also to the nation. At present, the quantitative and qualitative education system has depended on pupil's academic achievements. The academic achievement is one of the top priorities for the individuals and for the school too, apart from the society. It is the outcome of education, that extent to which a student, teacher or institution has achieved their educational goals. Academic achievement is commonly measured by the examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important. It is fact that a nation's progress depends upon its' student's academic achievements and development. That's the reason each and every society emphasizes on its student's academic achievements. The academic achievements of the students lead the development of the society to go forward ahead. The recent move of the world become more and more competitive to its citizen. Hence, Quality of performance has become the key factor for the individual progress.

1.1.1. ATTITUDE TOWARDS SCIENCE:

An Attitude is our personal temperament, which we reflect towards different things under distinct scenarios. An attitude is a relative term, which can be change with time and according to the needs of an individual. Attitude towards Science is a mindset of a student towards Science subject. Science is a subject of common people. The whole world is highly dependent on scientific and technological innovations. It is highly observable that our common domestic needs and commercial needs are solved with Science and technology (Mishra, 2013).

The progressive subject is this i.e. there is no saturation point of scientific discoveries. A type of discipline and appreciation of technology can only be achieved if we can develop positive attitude towards Science. Science is a subject of development as it enhances the skills; induce rationality in thought process and action in their approach. Science is one the subject that builds a relationship of an individual to his environment. It induces self-confidence and self-reliance inside the human being.

Scientific Attitude is the most important outcome of science teaching, through some educationalist view that scientific attitude as a by product of teaching science, yet a majority of educationalists consider it to be major product or the aim of science teaching. Thurston has used the concept of attitude as the sum total of man's inclinations and feelings, prejudice or bias, pre-conceived notions, ideas threats and convictions about any specific topic.

Attitudes are developed, they are not inborn. They can be changed or modified over the time. These modifications of attitudes are based on some of the determinants like culture, tensions, needs, emotions, experiences, provisions etc. Such an attitude is also noticed in the field of science, which we consider as scientific attitude, Here the scientific attitude means ones inclination or readiness of mind towards the pursuit of scientific knowledge. This scientific attitude sometimes interchanged with scientific temper. This temperament is a tendency of an individual who is very much inclined to learn scientific concepts.

Scientific Attitude is the part of the attitude. And this is the second value monopolized by science, which is transferable. These attitudes of a scientist involve critical observation, open-mindedness, suspended judgments, free from superstition and false belief etc., which will be discussed in detail later on. The attitude once developed in the students proves useful in later life of the child. Apart from this the teaching of science is based on sound psychological footing. The principle of activity is the main basis of the teaching of science and satisfies the instincts of curiosity, creativeness, self-assertion, and self-expression etc. of the pupils.

Scientific Attitude refers to an individual's outlook towards life. It means a willingness to adopt scientific approaches and procedures for resolving issues, condition, and a stabilized mental set, which expresses itself in a tendency to react to any member of a class of stimuli in the same general way. Scientific attitude predisposes a person to engage in responsible action after weighing the possible consequences of alternative options, using rational arguments based on evidence.

1.1.2. ACADEMIC ACHIEVEMENT:

Academic Achievement assumes primary importance in the context of an education system aimed at progressive scholastic development of the child and human resources development at the macro level. The scientific rearing and education of a child is monitored on the basis of his academic achievement. Academic achievement is the core of the wider term i.e. educational growth. The importance of academic achievement in one's life cannot be over emphasized. It acts as an emotional tonic. Sound academic records are the pillars on which the entire future personality stands. Academic achievement have always been the centre of educational research and despite varied definitions about the aims of education, the academic development of the child continue to be the primary and most important goal of education . Life in general and for a student in particular has become highly competitive. Today there is no place for a mediocre student. There is limited room at the top that too only for die best. The importance of scholastic and academic achievement has raised important questions for educational researchers. What factors promote achievement in students? How far do the different factors contribute towards academic achievement? (Ramaswamy, 1990). In this context, the role of socio-economic status cannot be denied as it has a great effect on personality, learning and development of the individual and his academic achievement.

Academic achievement is an essential parameter, which guarantees how pupils perform in their academics. Academic achievement is not a single entity rather it is the grouping of multiple activities, which is manifested by students in number of activities. Academic performance is a combination of scholastic and co-scholastic activities. The co-curricular activities are as important for students as the curricular and examinations.

Dictionary of Education (2003) defines "Academic achievement means the knowledge attained or skills developed in school subjects, usually determined by test score or by marks assigned by teacher or both".

Oxford Advanced Learner's Dictionary (2000) reflects "Achievement is a thing that somebody has done successfully, especially using his/her own effort and skill. Academic achievement in this sense will mean in learning the contents of books taught in the school".

Gardener (1993) agreed that there are number of ways to judge and assess the academic performance of students. He further concluded, "Assessment, then, becomes a central feature of an educational system. We believe that it is essential to depart from standardized testing. We also believe pencil-and-paper; short-answer tests sample only a small proportion of intellectual facility. The means of assessment we favor should ultimately search for genuine problem-solving or product-fashioning skills in individuals across a range of materials."

Academic Achievement of students, it has been assumed that, may not only depend on the quality of schools and the teachers, rather the extent of parental involvement has vital role to play in academic achievement of their kids. The focus of this study is to examine a relationship (if any) between the extent of parental involvement in academic activities of their children and the level of their children's academic achievement. The transition from middle school to secondary school may be an overwhelming and stressful experience for young adolescents. Developmentally, students are entering a period in their lives when their physical, cognitive, psychological, and social characteristics are beginning to evolve. Secondary school students experience both a contextual change and a personal, biological change during this transition. It may often a confusing time for students, their families, and the other adults in their lives who seek to support their healthy development and learning. The secondary school learning environment may be more complex than elementary school and academic achievement expectations increase, children are more likely to have higher academic achievement levels and improved behavior when families are involved in their education (Bryan, 2005). Learning begins at home through interaction with one's family.

Academic Achievement is the most important tool to assess the performance of students. Academic achievement has its dependence on so many factors such as quality of teachers, classroom environment, peer relationship and so on. All these factors constitute the academic performance of students.

1.1.3. SCIENCE IN SECONDARY and HIGHER SECONDARY LEVEL

After independence of INDIA, the pattern of the Higher Secondary Education in India was influenced by the recommendations of University Education Commission, which regarded Higher Secondary Education as very important, because it was the foundation of University Education. Secondary Education Commission made valuable suggestions for the improvement and re-organization of secondary education and recommended the diversification of courses to meet varying aptitudes, interests and talents of the learners.

Different states of India, therefore, introduced diversified courses at the secondary stage of education. The Education Commission recommended introduction of uniform structure of school and college education throughout the country. It also pointed out that secondary education is a complete unit by itself and that at the end of this stage the student should be in a position to, if he wishes, take up some useful vocation. Prior to the implementation of 10+2+3 scheme of school and college education, diversification of courses started from class IX i.e. approximately at the age of 14+. The students at this age are not mature enough to take such an important decision. Moreover, their talents and aptitudes are not likely to have crystallized fully at this age to enable them to take a judicious decision in this regard. In this regard, Kulshrestha stated that the enlarged curriculum might create confusion in the mind of an immature child studying in class VIII, who is still young. Regarding the scheme of diversification of courses, Education Commission stated that one of the major weaknesses in the scheme is that specialization of studies begins too early.... The streaming of pupils in this way is undesirable.

The Commission further suggested that secondary schools should admit the best students. At the higher secondary stage, the selections for admission have to be more rigorous. It is, therefore, imperative that only those students should be admitted to science stream that possess the cognitive, affective and other characteristics necessary for success at this stage.

The British Journal of Educational Psychology was made an attempt by organizing a number of symposia for discussing the importance and procedure of selection of students for admission to different streams of secondary education. A number of eminent psychologists and educationists participated in the deliberations and contributed research studies in that regard. The general agreement is that streaming and diversification of courses should be introduced at the age of 16+, when students have acquired necessary general education at least for 10 years.

1.1.4. ACADEMIC ACHIEVEMENT OF SCIENCE SUBJECT

In formal school system, science, as a discipline, stimulates the learners to conduct an enquiry which is bias free and objective and if such practices are continued over the time then the learners get trained in scientific methodology, that is exploring something systematically and logically, and develop scientific attitude, which means the behavioristic disposition, on the part of the individual, to act in certain way in definite situation.

At a Broad level, in formal school system, one of the significant parameter to reflect upon students' over all academic performance is achievement in science (Mukhopadhyay, 2014) because it has scientific attitude as an operational dimension which is a tendency to respond favorably/unfavorably to some classified stimuli and in fact it is the ability to act/react with rationale, objectivity and consistency in definite and précised ways to some context/situation which may be problematic or novel in nature. Scientific method is the potential to attempt something in a trend that relies upon verified principles (Olasehinde & Olatoye, 2014).

1.2. STATEMENT OF THE PROBLEM

In Science Education, to achieve the expected learning outcomes, the Government of Tripura and Government of India has now shifted its attention to improve quality of education with General Education Quality Improvement Package Programs that have been positively influence students' achievement. In the same way, the intention of Government of India is attempting to increase the number of graduates especially in the fields of science, technology and innovation to become skillful knowledgeable workers to sustain the nation and to achieve the title of middle developed nation. The main concern of this study is to systematically detect the concept and status of **"*A Comparative Study on the Achievements of same batch of Students in HS Examination compare to the Madhyamik under TBSE in Tripura State*"** and provide possible solutions in this regard.

1.3. JUSTIFICATION OF THE STUDY

Science Education, why it's important in our schools and even in society? We are surrounded by technology and the products of science every day. Our life and living status is also depended on science which has been proven even after the pandemic situation of **COVID – 19 Nobel Corona Virus infection** too. Public policy decisions that affect every aspect of our lives are based in scientific evidence. And, of course, the immensely complex natural world that surrounds us illustrates infinite scientific concepts. As children grow up in an increasingly technologically and scientifically advanced world, they need to be scientifically literate to succeed.

Ideally, teaching the scientific method to students is teaching them how to think, learn, solve problems and make informed decisions. These skills are integral to every aspect of a student's education and life, from school to career. With a graduate degree in Science Education such as the, teachers can use what they learn about science instruction techniques and curriculum design to advance science education and student learning as a whole.

Governmental guidelines and tests often focus on middle and high school-level education. Yet, many educators believe science education should begin much earlier. Not only does science education teach young learners problem-solving skills that will help them throughout their schooling, it also engages them in science from the start. Kids usually form a basic opinion about the sciences shortly after beginning school. If this is a negative opinion, it can be hard to engage those students in science as they grow older. Engaging young students with exciting material and experiences motivates them to learn and pursue the sciences throughout school.

Science Education is one of the most important subjects in school due to its relevance to students' lives and the universally applicable problem-solving and critical thinking skills it uses and develops. These are lifelong skills that allow students to generate ideas, weigh decisions intelligently and even understand the evidence behind public policy-making. Teaching technological literacy, critical thinking and problem-solving through science education gives students the skills and knowledge they need to succeed in school and beyond.

To any educational set up and system, one of the most important outcomes is achievement of the students. Depending on the level of achievement, individuals are characterized as high achievers, average achievers and low achievers or slow learners. Many studies indicate that the academic achievement is dependent on variables like school/college set-up and its organization, socio-economic status of students, educational aspiration, well-adjusted behavior etc. Beside these the personal characters, vocational aspirations, creativity intelligence, attitude, values, etc. also influence it. The division of society in to different classes and association of parents with a certain class and its linked with the education of their children is an all-important feature of our society. The home, as is universally accepted, is the first school of child. As such, a suitable home environment is most conducive to the spread of education among its young members.

Science status is an important factor in shaping their attitude towards encouragement or neglect of education of children. Students belonging to science status could get easily all the necessary things which they require for their high achievement. To realize the democratic ideal of equalizing educational opportunity, it's necessary to estimate the extent to which progress in education i.e. academic achievement at Secondary school level and HS level in Tripura is being influenced by the science subject.

Man Making is the prime focus. The present investigation therefore was conducted, to fulfill this need and aimed at to explore the relationship of the science with academic achievement as well as with man-making. It was assumed that the conclusions drawn on the basis of the study regarding the relationship between the variables and their effect on academic achievement might provide necessary guideline for improving the academic achievement of school students on Science Education at the Secondary and Higher Secondary Level.

1.4. SCOPE OF THE STUDY

The scope of present study is given following numbers: -

1) This study has wide scope and it enable conducted to all the state and central Secondary Education Boards of the country - India.
2) The study can be wide scope and it can be done throughout the country - India as well as at the level of other countries.
3) This study can be done based on the other parameters too such as Urban and Rural schools etc. and also it enable to conduct on the District wise for better micro analysis.

1.5. OBJECTIVES OF THE STUDY

The following objectives are formulated for the study:

Main Objective

1) To study the batch wise appearance, enrolment, achievement and success of the candidate students of Tripura State towards Science, Arts (Humanities), and Commerce stream-based education in the higher secondary examination compare to their secondary examination conducted by the TBSE for last 08 batch.

Minor Objectives

1) To study improvements of the candidate students of Tripura State in the higher secondary examination compare to their secondary examination conducted by the TBSE towards the achievement in science stream for last 08 batch.
2) To study improvements of the candidate students of Tripura State in the higher secondary examination compare to their secondary examination conducted by the TBSE towards the achievement in Arts (Humanities) stream for last 08 batch.
3) To study improvements of the candidate students of Tripura State in the higher secondary examination compare to their secondary examination conducted by the TBSE towards the achievement in commerce stream for last 08 batch.

1.6. HYPOTHESIS OF THE STUDY

The following hypotheses are formulated to empirically validate the above objectives

1) There will be a significant difference between the mean scores of candidate student of TBSE compare to Madhyamik and their Higher Secondary achievements.

2) There will be a significant difference between the mean scores of candidate student of TBSE compare to Madhyamik and their Higher Secondary achievements with respect of science stream acceptance.

3) There will be a significant difference between the mean scores of candidate student of TBSE compare to Madhyamik and their Higher Secondary achievements. with respect of Humanities (Arts) stream acceptance.

4) There will be a significant difference between the mean scores of candidate student of TBSE compare to Madhyamik and their Higher Secondary achievements. with respect of Commerce stream acceptance.

1 .7. VARIABLE OF THE STUDY

Which can be measure it's called variable? In this research work there is a two variable.

- Independent variable: Academic Achievement.
- Dependent variable: Science Subject.

1.8. DELIMITATION OF THE STUDY

- This study has been delimited to the Madhyamika candidate under TBSE of state Tripura.
- This study has been delimited only the state of Tripura.

1.9. OPERATIONAL DEFINITION OF THE KEY TERMS

- ***Achievement***:

  Achievement denotes marks and grades in examinations which acquired by candidates from his or her Madhyamik & Higher Secondary Examination under the Tripura Board of Secondary Education (TBSE).

- ***Candidates:***

  The candidates denote the boys and girls i.e. enrolled students, who appearing Madhyamik and there after the Higher Secondary Examination under Tripura Board of Secondary Education (TBSE).

- ***Madhyamik:***

  An ever first Certificate course based public Examination controlled by an autonomous body performed by the candidate students, who are completed already 10th class of formal education known as Metric or Madhyamik. The Certificate is here provided by the board known as Tripura Board of Secondary Education (TBSE).

- ***Higher Secondary Examination:***

  The next level public examination under board after Madhyamik examination, which is the end level of schooling Certificate course Examination or pre-college course examination and controlled by an autonomous body performed by the candidate students, who are completed already +2 stage study in +2 years of formal education after 10th class and Madhyamik Examination. The Certificate is here provided by the board known as Tripura Board of Secondary Education (TBSE).

- ***State:***

  The State refers to the state of TRIPURA, The tiny state of North-East India and one prime partner state among the seven sisters – one brother or Ashta-Laxmi land. The state is surrounded by International Border with Bangladesh in three sides apart from one side where the state is attached like appendix with the rest Indian land and partially with both state Assam and Mizoram. It's the state which has been constituted the Tripura Board of Secondary Education (TBSE) to conduct its own school level Board Public Examination processes after Secondary and Higher Secondary level like Madhyamik and there after the Higher Secondary Examination.

- ***Batch:***

  The Batch denotes the same group of candidate-students i.e. the boys and girls, who are appearing Madhyamik after their 10th Class and there after the two years of study of +2 stage again appearing the Higher Secondary Examination under Tripura Board of Secondary Education (TBSE). The batch has been indicated as 2010/2012 means a group appearing Madhyamik on 2010 and thereafter Higher secondary on 2012 i.e. after a scheduled interval of study.

- ***TBSE:***

  The Tripura Board of Secondary Education (TBSE) is the responsible autonomous organization to conduct Secondary & higher Secondary level public examination process in Tripura State for State Govt based schools and was established in 1973 by an Act (Tripura Act. No.12) called Tripura Board of Secondary Education Act, 1973 as passed by Tripura Legislative Assembly. The Board started its functioning from the 1st January, 1976. Intervening period was spent in framing Rules and Regulations, Curricula and Syllabi, and such other guidelines which were being necessary for smooth and active conduct of the business of the Board. It was in 1976 that the Tripura Board of Secondary Education conducted its first Public Examinations - School Final Examination [old system], Madhyamik Pariksha (Secondary Examination) [new system], and Higher Secondary Examination [old system]. Subsequently, Higher Secondary (+2 stage) Examination [new system] was introduced in 1978. Before 1976, all the High and Higher Secondary Schools of Tripura were affiliated under the West Bengal Board of Secondary Education and the students of Tripura had to appear at the School Final and Higher Secondary Examinations conducted by the West Bengal Board of Secondary Education. With the abolition of old courses, the Tripura Board of Secondary Education now conducts 2(two) major Public Examinations --- Madhyamik Pariksha (Secondary Examination) and Higher Secondary (+2 stage) [both General and Vocational courses] Examination since 1981. With the passage of time the core curricula were also changed from time to time and ultimately adopted the syllabi as per NCF, 2000 guidelines from 2006. The Syllabi and Question Pattern as per guidelines of

NCF, 2005 are under active consideration of the Board. The Tripura Board of Secondary Education is one of the few Boards in the country which has introduced Centralized Evaluation system from its very inception. Headed by the President of the Board, Tripura Board of Secondary Education is governed by a Governing Body. The Act provides for constitution of several Committees, and each Committee headed by the President, and the Secretary acting as its Convener.

Chapter II - Review of Related Literature

2.1 INTRODUCTION

In continuation to the previous chapter, where the investigator has presented the statement of problem, Genesis of the problem, Need and importance of the problem, Objectives of the study and limitations of the study etc., here through the present chapter the investigator has presented and discussed the review of related studies, as a means of making the present study very precise, correct and authentic.

2.2 MEANING OF REVIEW OF LITERATURE

In planning phase of the study and before undertaking the research study, Collection of library-based information has been done to be well equipped to conduct such an authentic study. The review of related literature exhibits the crystal clear and definite idea about the problem on which the investigator carrying the research. For this the investigator has referred to the studies done by the researchers earlier related to the present study. Towards the fact, the investigator has referred to the studies done by the researchers earlier related to the present study which enlightens an idea about the methodologies adopted for different studies and objectives of the studies, major findings of the study which helps an investigator to sharpen the problem and state specific objectives and to select suitable methodologies and to utilize proper tools and techniques for the study and also to get an idea about the major findings of the study.

Hence review of related literature is an important stage of research study, which the investigator has to conduct well in time and in a meaningful manner before Organizing the research study.

2.3 REVIEW OF RELATED LITERATURE

Primary Studies:

In **1977** **Krishnan** conducted a Study on non-intellectual factors and their influences on academic achievements. The sample comprised of 180 students of sixth to ninth class studying in central school Tirupati and was divided into three groups depending on their parent's education as high, middle & low. The results indicated that parent's educational status had significant influence on the academic achievement of their children.

1983 Aggarwal conducted a Study on reading ability in relation to some cognitive and non-cognitive factors. The sample constituted 200 boy & girl students selected randomly from the high schools of Bihar in India. Data were collected by administering reading ability test to the sample. The results of the study indicated that girl students had better reading ability and higher academic achievement than the boys.

1983 Singh & Srivastava investigated the impact of parent's literacy on the academic achievement on sample of 85 first grade and 80 fifth grade students of Punjab in India. Student's scores on an achievement test were taken as measures of academic achievement of the students. The findings indicated that Parent's literacy had a positive relationship with younger students' academic achievement.

1984 Sharma conducted a Study on academic achievement of school students vis-à-vis their parent's education. The sample comprised of 230 ninth class students of Punjab in India from whom the data for the educational level of their parents were collected and analysed. The findings revealed that the parent's education was positively and significantly associated with academic achievements of their children.

1986 Baker & David recognised mother's strategies for children's school achievement. The investigator collected data from heterogeneous sample of mothers of eight grades through interview schedule. The result also indicated that parents actively manage their children's school career in a way that could have direct consequences for their children's academic achievement. Mother's education levels were found to influence academic achievement of the students through parental involvement and parental encouragement.

1997 M. Faye Neathery had conducted, Attitudes associated with science appear to be affecting student participation in science as a subject (AAAS, 1989; Koballa, Crawley & Shrigley, 1990) and impacting performance in science (IAEP, 1992; Weiss, 1987; Linn, 1992). An international assessment of nine-and-thirteen-year-old students in twenty countries (IAEP, 1992) revealed that positive attitudes toward science ice student performance. Positive student attitudes toward science were to higher science performance by the majority of 13-year-old students in 15 countries (IAEP, 1992). In Korea there was a notable exception; only one-quarter of the top-performing students exhibited positive attitudes toward science (IAEP, 1992). The students participating in the study came from a school system in a community near a major southeastern city. The sample consisted of 711 students selected randomly at the rate of 15 per 100 students from a school population of 5,661 students. The students were enrolled in ability-grouped language arts classes in grades four through eleven. A matrix of criteria including intelligence quotient, achievement test scores, teacher recommendation, and academic performance was used for student placement in ability groups. The sample was 79% Caucasian, 13% Latin American and 8% African and Asian American students. The sample was evenly divided by gender with 376 males and 335 females. The students were represented by 24% elementary students in grades 4-5, 41% middle school students in grades 6 - 8, and 35% secondary students in grades 10 - 11. Three ability groups were represented with 21% high ability, 58% average, and 21% low ability. There were no significant differences between the attitudes toward science as a subject and gender with one exception. Males rated science as a subject more exciting than females. Conversely, the findings of other researchers show that male students in the United States demonstrate more positive attitudes toward science than do females (Czerniak & Chiarelott, 1984; Kahle, 1983; Schibeci & Riley, 1986). Recent research by AAUW (1992) reveals that although female students receive equal, or sometimes better, grades in science courses, the females exhibit less interest in science subjects than male students. Ethnicity did not correlate with any of the five attitudes toward science as a subject.

2002 Zammit, Alia Routitsky and Lisa Greenwood had conducted; The Third International Mathematics and Science Study (TIMSS) 1998 assessed the mathematics and science achievement of students in their second year at high school. Vesting for the study was carried out in 38 countries in 1998.99.1 Extensive information was collected from students, teachers and school principals about the context of mathematics and science teaching and learning. Among the countries participating in TIMSS 1998, 26 countries, including Australia, also participated in TIMSS 1994. It was therefore possible to report on any significant changes between the two studies. Two reports, TIMSS 1999 International Mathematics Report and anal International Science Report were released in December 2000. This report, Mathematics and Science Achievement of Junior Secondary School Students in Australia, analyses and interprets the Australian data collected as part of the study, where appropriate, it makes comparisons with the results of a number of countries and the international average to better understand the Australian achievement and context. This report provides a broad overview of student achievement and some of the contextual information collected from the questionnaires completed by students, teachers and school principals. It is evident from this summary that the achievement of Australian students, who took part in TIMSS 1998 continued to be very encouraging. Students achieved above the international average in both mathematics and Science. Achievement in mathematics is below that of our Asian neighbors such as Singapore, Korea, Chinese Taipei and Hong Kong. However, in science Chinese Taipei is the only country whose achievement was significantly higher than Australia, with the results for Singapore, Korea and Hong Kong not significantly different from Australia's.

2003 Igwesi compared the academic achievement of students from monogamous and polygamous families in Offa, Kwara State. The research design used was causal-comparative. The sample for the study was made up of 200 Senior Secondary one student (100 from monogamous and 100 from polygamous families) selected from four schools in Offa using the stratified simple random sampling technique. A format was used for collecting data on academic achievement of students and the data analyzed using t-test statistics. The result of the analysis showed that a leant difference exists between the academic achievement of student from monogamous homes and those from polygamous homes with students from monogamous homes achieving higher mean scores than their polygamous counterparts.

2005 Taiwo O. Ogunmade had conducted, this study investigated and described the status and quality of secondary science teaching and learning in Lagos State, Nigeria. Quantitative and qualitative methods were used for gathering research data. Quantitative data were obtained from the surveys of 78 junior secondary science teachers and 500 junior secondary students from three Local Education districts of Lagos State. Qualitative data on the other hand, were gathered from analysis of national and state curriculum documents and from focus groups of science teachers, school principals, parent association representatives, and education officers, and teacher educators, representatives of the professional association for science teachers and representatives of examination bodies in Lagos State, Nigeria. Other key stakeholders including scientists in a government establishment and those working in industry were also interviewed. Quantitative data were coded and analyzed using the SPSS 13.0 statistical package to produce descriptive statistics. Qualitative data also were transcribed and categorized into emerging themes. Triangulation of data from various sources was used to reveal pictures of actual science teaching and learning and an ideal science for junior secondary schools in Lagos State, Nigeria. Findings from this study indicate a gap between actual science teaching and learning and an ideal school science with regards to curriculum, pedagogy and learning, class sizes and resource allocation, teacher knowledge and skills, attitude and professional development, and community support. Finally, realistic recommendations for closing the gap between actual and ideal science are suggested with possible actions for improving the quality of science teaching and learning for Lagos State, Nigeria.

2005 Zebun Nisa Khan observed that, the present study was conducted on 400 students (200 boys and 200 Girls) selected from senior secondary school of A.M.U., Aligarh - India, to establish the prognostic value of different measures of cognition, personality and demographic variables for success at higher secondary level in science stream. The scores obtained on different variables were factor-analyzed to get a smaller number of meaningful variables or factors to establish the predictive validity of these predictors. Factors responsible for success in science stream were identified. The prognostic value of the predictors was compared for high achievers and low achievers in order to identify the factors which differentiate them.

2005 Jianjun Wang had made on, Mathematics and science achievements have been assessed in the Third International Mathematics and Science Study (TIMSS) and its repetition (TIMSS-R). Most existing reports are largely separated into the domains. This article is focused on an examination of the relationship between mathematics and science achievements based on student test scores. Moderate correlation coefficients have been found from the statistical analyses on TIMSS and TIMSS-R measurement scales. These empirical findings may help mathematics and science educators assess the need for curriculum integration advocated by several professional organizations in the U.S. and other nations.

2006 Jesuina M. B. Fonseca and Joseph E. Conboy observed that, High rates of failure in secondary level science classes are a problem worldwide. Effective teaching and efficient management of schools requires information as to the causes of failure. One approach to acquiring this information is to improve our understanding of what the students themselves perceive as the causes and antecedents of school failure. In this article, we analyze the perceptions of the factors of academic failure among grade-ten, science-tracked students. Students from eight schools in southern Portugal (N=346) participated in the study. The major factors of failure in 10th grade science courses, according to students, are quality of teaching and previous student preparation. One third of the students did not think that secondary science education prepared them for life in a scientific-technological society. A culture of high expectancy on the part of teachers, parents and administrators may be key to influencing rates of success.

2006 Halawah examined the effect of motivation from family environment and student characteristics on academic achievement on the sample comprised of 388 high school students including 193 girl students of Abu Dhabi district in United Arab Emirates. Grade point average was taken as measure of academic achievement of the students. The results revealed no significant gender difference in academic achievement of the students.

2006 Preiss & Franova analyzed the relationship between depressive symptoms, academic achievement and intelligence. The data were collected from the sample of 635 school students consisting 304 boys and 331 girls by using Wechsler's intelligence scale for children and grade point average. The findings indicated that there was no gender difference in academic achievement of boys and girls.

2007 Sharma studied the problem-solving ability and scientific attitude as determinant of academic achievement of higher secondary students. Descriptive purvey method, involving multistage random sampling, was used. The sample consisted of 240, male and female, XI class students from Hindi medium Government schools. It was found out that with respect to achievement, there was a non-significant difference between both the genders and high achiever students had high level of scientific attitude. There was a significantly positive correlation between scientific attitude and achievement, scientific attitude and problem-solving ability, achievement and problem-solving ability but these correlations were mild among boys in comparison to girls.

2009 Olatoye, R. A. had conducted, this study compared study habit, self-concept and science achievement of students in public and private junior secondary schools in Ogun State, Nigeria. Twelve secondary schools were randomly selected from Egba and Ijebu divisions of the state. A sample of three hundred and sixty (360) students participated in the study. Three research instruments were used to collect data. There was no significant difference in study habit and self-concept of students in public and private schools. However, private school students performed significantly better than their public school counterparts in integrated science (t =3.400, p<0.05). In both public and private school's student study habit and self-concept combined together and singularly predicted science achievement. Counsellors should encourage students to study and also train them on how to improve their self-concept in order to improve science achievement.

2009 Research Division had investigated; the Ministry has put in place a number of mechanisms for monitoring student performance in science at the system level in primary and secondary education. The following information about science learning is drawn from system-level monitoring and is based on evidence from a range of national and international surveys that have been carried out during the last 15 years, starting with the first Trends in International Mathematics and Science Study (TIMSS) in 1994. We are interested to see what the latest research results on science achievement might mean for policy, practice, and potential research areas. While overall the changes in the data on student achievement in science do not give cause for immediate alarm, some small downward movements as well as shifts in related measures (e.g. student interest and time spent in science) are starting to be observed. The meaning and potential impact on science achievement of such shifts and the extent to which they are likely to continue has still to be fully explored. In this report, we aim to summaries key issues for policy and practice raised by data on engagement and achievement in science across primary and secondary schools. This information has been collated across national and international studies undertaken
le last 15 years. The most recent information for primary schooling comes torn the National Education Monitoring Project (NEMP) in 2007 and from TIMSS 16/07 (Year 5). At the secondary level, information comes from the Programme for International Student Assessment (PISA) in 2006, NCEA results, and TIMSS 2002/03. In addition, there is information from the Competent Learners Study, the ions Study, and from a national survey of primary schools conducted by

1ZCER in 2007. The collated evidence is being used as a basis for engaging with the v and Implementation Board and the Leadership Team; as a means of Elaborating with communities of interest in policy, research and practice; and as a context that will help develop key messages for the release of New Zealand internationally in December 2008 from the implementation of TIMSS in 2006/07.

2011 Hussain, Khan, Latif, Amin and Sibtain carried out a study to compare the academic achievement of science and arts students in compulsory subjects at the secondary school level with particular reference to male and female students. The sample for the study comprised of a total of sixty students. Thirty students each were randomly selected from boys and girls (15 science and 15 arts students from each group). Four null hypotheses regarding the cross check of achievement between science and arts male and female were tested. The mean, standard deviation and variance and the difference between mean (t-test statistics) was used for data analysis. The result revealed that the female science students showed significant better result than female arts. Male science students showed significant better result than male arts while female science and female arts students were significantly better than their male counterparts.

2011 Adeyemi investigated students' academic performance in public examination in Secondary Schools in Ondo and Ekiti States, Nigeria. The research design was descriptive. The population was composed of all 281 Secondary Schools in Ondo State and the 171 Secondary Schools in Ekiti State. The stratified random sampling technique was used for the selection of 240 and 146 Secondary Schools from Ondo and Ekiti State respectively. The instrument for data collection was an inventory and the data collected were analysed using percentages, Chi-square test and the t-test. Result of the analysis revealed that the performance of students at both Junior Secondary Certificate (JSC) and Senior Secondary Certificate (SSC) examinations were low. There was no significant difference in the performance of students from) States in JSC but there exist significant differences in their performance at level.

2011 Ruey Shieh, Wheijen Chang & Eric Zhi-Fengliv conducted a study on Technology Enabled Active Learning (TEAL) in Introductory Physics: Impact on Gender and Achievement Levels. This study explored the impact of technology enabled active learning (TEAL) on students learning general Physics, focusing on differences between genders and among various achievement levels. A quasi-experimental investigation was conducted in this study. Data sources consisted of ests, Post-tests, self- Report Surveys, Class Observation and Interview data. The statistical Techniques used in this study were Mean, standard Deviation and 'f test the findings of this study indicate that the learning gain achieved by the experimental group was 11% higher than that achieved by the control group in the first semester, though the margin decreased to 1% in the second semester. In the situation of the low achievement level, there was no significant difference found in the learning gain achieved by the two groups in the second semester. The qualitative data revealed that student-academic performances were disclosed to be associated with the following factors: the instructor's teaching styles and instructional skills, the dents' prior knowledge, their study habits and the cohort atmosphere, that is, implementation of the innovative tool alone might not be sufficient to significantly improve student performance. Nonetheless, the interactive, collaborative instructional approach sensed to appeal to females more than it did to males, disclosing the potential of TEAL in narrowing the learning gap between genders.

2011 Okafo and Egbon made an, it was hypothesized that no difference exists between male and female performance in undergraduate accounting courses. The subjects used for the study were first year male and female accounting undergraduate students of the University of Benin, Nigeria who sat for Introductory Financial Accounting Courses namely, Introduction to Financial Accounting I & II in 2004/2005 to 2007/2008 academic session. The letter grades of A, B, C, D, E & F with a weight of five, four, three, two, one and zero respectively were used as measures of academic performance. The t-test statistics for the difference between two independent samples was adopted for the study. The study revealed that there is no significant difference between academic performance of male and female accounting students in undergraduate accounting courses.

2012 Ogundele compared students' academic performance in Mathematics and Principles of Account using scores obtained by students in the subjects in two academic sessions 2008/2009 and 2009/2010. The outcome of the study showed that the relationship between academic performance in Mathematics and Principles of Account was in significant.

2012 Gopal, Mirunalini & Anandan made a study on Gender and Parental Income towards the Effectiveness of Computer Assisted Instruction on Achievement in Science among Primary School Students. The aim of the present study is to measure Gender and Parental Income towards die Effectiveness of Computer Assisted Instruction on Achievement in Science among Primary School Students. The Study belongs to Experimental Research. Single group sampling design was followed in study. The size of the sample is Forty-Two students studying in primary school were selected through Random Sampling Technique. The investigators themselves developed the tool 'Achievement in Science' which consists of forty items comprising three units in multiple choice pattern. Standardized CAI Software on selected science concepts were used as treatment. Mean, Standard deviation and 't' test techniques were used for analyzing the data. The findings revealed that the Gender and Parental Income towards the Effectiveness of Computer Assisted Instruction on Achievement in Science among Primary School Students. It also revealed that there is no significant difference on Gain Scores of the Mean Achievements in Science through the treatment of CAI software among Primary school students with respect to Gender and Parental Income.

2012 Edwin Thangom made an "A study on the Effective of Using Science Lab Equipment on the Achievement in Science among the Students of Standard IX". The Study belongs to Experimental Research. The sample consisted of 57 Students. Achievement Test in Science as tool for this study. The major findings of the study were:

1) The Female students secured significantly higher achievement score in science than the male students.
2) The SC students secured significantly higher achievement score in science

than the BC and MBC students.

3) The Mean achievement scores in science were found to be high.

2012 Radho, John Oluko had conducted, The central problem addressed in this study is that the major factors influencing students, achievement in science subjects under the newly structured 8:4:4 education system in Kenya are poorly understood. To this end, the main purpose of the study was to identify and analyze the influence factors such as classification, type and boarding status of schools, school resources, some selected student and teacher characteristics and school learning related practices have on students' achievement in science. A purposive sampling technique was used to select 867 Forms 3 and 4 students as well as 48 Science handling these classes. The data was collected using questionnaires, interview schedules and Science Achievement Test, and analyzed by a computer utilizing both descriptive and inferential statistical techniques. The study found that students from National and Provincial schools performed better than those from Private and District schools. Students from Boys' School excellent in Physics and the project while those from the Girl's school excelled in Chemistry. It was found that KCPE Mathematics was a good predictor of Physics and Project performance while KCPE English was a good predictor of Chemistry performance. Boys who had a better mathematics background at primary school as measured by the quality of their KCPE Mathematics grades performed better in Physics and the Project than girls. The study also established that it was more of the effective use made of learning resources such as textbooks, laboratory equipment and apparatus that resulted into higher achievement in science. Students who were frequently given homework and got it marked promptly, given continuous assessment tests regularly and exposed more to practical’s performed better in physics and chemistry than those who were given less or none of these learning practices. Also, the students with positive attitudes towards Physics and Chemistry performed better in the subjects. Finally, the subjects, greater than those taught by non-inquiry/lecture technique. It is apparent that students who learn Physics and Chemistry in an entirely investigative manner acquire a greater understanding of the subjects, greater than those taught by lecture method. On the strength of the main findings and conclusions discussed a number of recommendations which have implications for policy and further research were drawn. Recommendations with policy implications included the following:

- **(a)** Teachers should use more inquiry/practical methods in teaching Physics and Chemistry in combination with such methods as lecture and demonstration and field trips to ensure that the pupils are introduced to all the content relevant to the syllabus while also developing other skills,
- **(b)** To ensure that adequate content is covered in sciences particularly in Physics and Chemistry, the Ministry of Education through the Kenya Institute of Education should either the teaching time or reduce the current content. This could be done by integrating some parts and/or eliminating others in the case of Physics and chemistry.
- **(c)** Since one of the important facilities that promote students' achievement in Physics and Chemistry is the availability and efficient use of science laboratories, schools should equip the laboratories with apparatus and other learning resources to expose students to more practical.
- **(d)** Science teachers should give meaningful feedback to students through homework, continuous assessment tests, supervised study time and guided group and individual practical.

The recommendations that require further research include:

- ***I.*** An identical study to be conducted using a longitudinal study design,
- ***II.*** A study of mixed schools be conducted to determine the effect of co-educational schooling on motivation and achievement in science,
- ***III.*** A study should be conducted to establish the strategies to be adopted to popularize science and mathematics among girls and how to empower them to take up the challenge.

2013 Chandra conducted a study on "Achievement in Science through Rastriya
Madhyamik Shiksha Abiyan among the Students of Standard IX". The study belongs
to Survey research. The study carry out 195 Students have been selected by random

sampling from the schools. The major findings of the study were:

1) The Female Students are having significantly higher level of Achievements in Science through Rastriya Madhyamik Shiksha Abiyan than the Male Students.
2) Urban Students are having significantly higher level of Achievements in Science through Rastriya Madhyamik Shiksha Abiyan than the Rural Students.
3) Aided School Students are having significantly higher level of Achievements in Science through Rastriya Madhyamik Shiksha Abiyan than the Government School Students.

2013 Farkhanda Ahmar and Dr. Ehtesham Anwar had investigates, this study examined the effects of gender and socio-economic status on academic achievement of higher secondary school students of Lucknow city. The sample consists of 102 males and 98 females in age range of 15 to 19 from five higher secondary schools of Lucknow city Uttar Pradesh (India). Socio economic status scale developed by R. L. Bharadwaj (2005) was used for data collection, while the total mark obtained by the students in the previous class i.e. standard X was used as an achievement criterion. Mean (M), Standard Deviation (S.D), Standard Error of the mean (S.E.M), t-test were used. This study shows that gender docs not influence the achievement in science at higher secondary school (Standard -XI) level. Also the result of this study showed the difference between high and low socio-economic status groups. It is found that the academic achievement was influenced by the socio-economic status and those who belonged to high socio-economic status showed better performance. Based on these findings some recommendation was given with great implication for both practice and further studies.

2013 Hafiz Muhammad Waqas Rafiq, Tehsin Fatima, Malik Muhammad Sohail, Muhammad Saleem and Muhammad Ali Khan had conducted, the present research aims to explore the effect of parental involvement

in the academic achievement of their children. The research was conducted in Allama Iqbal Town, Lahore city. A total of 150 students (boys and girls) of 9th class of secondary schools (public and private) were taken as respondents. Four schools were selected through simple random sampling which include one boy and one girl from each of the public and private schools' categories for equal representation of both boy and girl students
in the sample frame of present study. Survey questionnaire was used as a tool for data collection. After the analysis of data, it was found that parental involvement has significance effect in better academic performance of their children. The present research has proved that parental involvement enhanced the academic achievements of their children.

2013 Maha & Ogumogu conducted survey-based study to probe the scientific attitude at senior secondary level in science stream. The study revealed that science stream students had average level of scientific attitude and sex had no significant race on it.

2013 Kskerasagar & Kavyakishore studied the science achievement, of 600 secondary school students, in relation to scientific attitude by using stratified random sampling by selecting students from Government and private schools. It was found that in comparison to boys, girls had better science achievement and students of private schools had better science achievement than Government school students**.** Further, scientific attitude was explored with respect to different levels like high, moderate and low and it was found out that the scientific attitude had main in achievement in science as the students with high level of scientific attitude had better science achievement than the students of moderate and low level of Scientific attitude.

2013 Narmadha & Chamundeswari conducted study on secondary school students to investigate their attitude towards learning of science and achievement in science. Random sampling was exercised in the selection of students from matriculation, state and central board schools and it was found that achievement in science and attitude towards learning of science are significantly positively correlated. Also, a significant difference in achievement in science and attitude towards learning of science among secondary school students in different categories of schools (in the favour of central board schools in comparison to matriculation and state board schools) was observed. Gender wise in all kinds of these school boards, girls have significantly better attitude towards learning of science than boys and in central board and matriculation level schools, girls performed better and hence had grater achievement in science than boys.

2013 Mani conducted survey on first year higher secondary school and found a significant gender difference, in the favour of girls, with respect to scientific attitude. A significantly positive correlation between attitude to science and scientific attitude, a non-significant positive correlation between scientific attitude and achievement in nee and attitude to science and achievement in science was observed. The boys and girls did not differ significantly from each other with respect to attitude to science, scientific attitude and achievement in science.

2013 U. Narmadha and S. Chamundeswari had conducted, the present study aimed to investigate attitude towards learning of Science and academic achievement in Science among students at the secondary level. Using random sampling technique 422 students, from the secondary level in different systems of education, namely, state, matriculation and central board schools were chosen. The Attitude toward Learning of Science Scale (Grewal, 1972) was used to assess the attitude towards learning Science and the marks scored in Science were taken from their half yearly performance. The data collected was subjected to statistical analysis, namely, mean, standard deviation, 'f- test, 'F- ratio, Karl Pearson's Product Moment Correlation Co-efficient V. Results showed that the students belonging to the central board schools have a higher level of attitude towards learning of Science compared to students in state board but did not differ with students in matriculation board schools at the secondary level. Similarly, students belonging to central board schools performed better in Science subject compared to the students in state and matriculation board schools at the secondary level. The girls are significantly better in their attitude toward learning of Science when compared to the boys in all categories of schools. In matriculation and central board schools the girls are better than boys in their academic achievement in Science whereas in state board schools there is no significant difference in their gender. A positive correlation was found to exist between attitude towards learning Science and academic achievement in Science among the students.

2014 Madan Singh and Rajendra Singh studies that, the purpose of this study was to compare the academic achievement and intelligence level of Secondary School students of science, management, and education streams to identify the enrollment trend of students in teacher education in Nepal. (Methods) In this study, 150 secondary school students belonging to eight schools were selected including 50 from each science, management and education stream. For academic achievement, grade point averages of Secondary Education Examination were collected from school records and a standardized intelligence test was used to identify intelligence level. (Results) Mean score of grade point averages and intelligence test of science stream students was greater than management stream students and average scores of management stream students were greater than education stream students. Analysis of variance revealed that there was significant difference among the mean scores of science, management, and education stream students at significance level a =0.01. Results show that the students with higher academic achievement and intelligence level are enrolling in science stream, average are in management stream and with low academic achievement and intelligence are in education stream, that is, teacher education. Review of previous studies and reports revealed that intelligent person are not attracting towards teaching profession and the condition is same till now. (Implications) Educational policy makers and stakeholders of Nepal should pay proper attention to make teaching profession attractive so that high achievers and intelligent persons may enroll in teacher education and quality of education could be raised. (Additional Materials) G. C. Ahuja Group Test of Intelligence (GGT1-A) used in this study to compare the intelligence of students studying in science, management, and education streams was developed by Dr. G. C. Ahuja, Former Research Officer, Central Institute of Indian Languages Mysore and published by National Psychological Corporation, Agra (India). Mean, variance and ANOVA were used as quantitative techniques; Scheffe's formula was used as post hoc analysis to calculate the pair wise F-ratio. Grade point averages and intelligence score enlisted in appendices.

2014 Srivastava probed the achievement in science as predictor of scientific attitude in intent and action. Secondary school boys' and girls' students served as sample for the study. It was inferred that with respect to boys, achievement wise knowledge, comprehension and application domains do not influence scientific attitude but in f girls, scientific attitude in terms intent and action can be predicted by comprehension and knowledge respectively.

2014 Letao Sun and Kelly D. Bradley pointed that, this study utilized data from the programme for International Student Assessment (PISA) 2006 Hong Kong sample to investigate the factors that impact the science achievement of 15-year old students. A two- level hierarchical linear model was used to examine the factors that influence science achievement from both student and school perspectives. At the student level, the results indicated that male students, students from high SES families, and students whose parents have higher values on the importance of science are more likely to have better achievement in science. At the school level, the results showed that the variation of science achievement between schools can be explained by differences in school enrollment size and school SES composition. This finding leads to an international discussion of school size.

2014 Feyera Beyessa had made on, the main purpose of this study was to explore the factors that affect grade-10 students' academic achievement in science education at Ilu Aba Bora Zone of General Secondary Schools. To attain this objective, descriptive survey research method was employed. The subjects of the study were 360 (172 male and female 155 students, 25 science teachers, 2 laboratory technicians and 6 school principals). Stratified sampling followed by simple random sampling (lottery method) technique was employed to select the sample students, purposive sampling technique was used to select the schools and availability sampling method was employed for science subject teachers, laboratory technicians and school principals. To gather the necessary data, questionnaire, and interview, observation and document analysis were used. The gathered information was analyzed using both quantitative and qualitative methods of data analysis. The result of the study showed that students were stagnantly engaged in traditional methods of teaching science education. Of major teaching science methodologies, small group (one to five) discussion ($M = 4.0$) method was the most dominant approach followed by gapped lecture and whole class discussion, which are not pedagogically supported in teaching science education of the modern time. Out of laboratory sessions, with statistically no significant difference between male and female students, they favored science education negatively and poorly involved in practicing it. 85.97% of activities in science educations of grade 9 and 10 were absolutely not done in the laboratory, which hinder students' understanding to handle science education easily. The study also revealed that, non-proficiency in English Language becomes an obstacle for students to grasp the concepts of science education. Although the professional supports of science teachers to their students were relatively fair ($M = 3.2$), they have not used their maximum potential to implement science education effectively. Parental involvement, peer pressure, schools support (regular attendance, providing facilities, evaluating the effectiveness of teaching learning, giving guidance) and other stakeholders commitment to enhance students' science education were very near to the ground. Lastly, absence of laboratory chemicals, rooms, apparatuses, technicians and well-organized laboratory manuals were negatively affected the effective implementation of science education and students' academic achievement as well. Thus, based on the findings of the study, recommendations were forwarded to alleviate the aforementioned problems.

2015 Teresa Maas, Michael Amolins and Peter Vitiello had investigated, While Many efforts have been made at the graduate level to train physicians for rural South Dakota, there has been little work to identify how geographic locale affects the Science achievement of high school students. This study utilized the urban-central locale code system to analyze South Dakota high school student ACT science scores. Rural student achievement was significantly lower than students from city and town locales. By analyzing such correlations, unique strategies can be developed to improve secondary rural science education and increase the number of students pursuing careers in rural medicine.

2015 Awoniyi Samuel Adebayo and Awoniyi Tinuola Dorcas the study compared the scores of students in Social Studies and Integrated Science at the junior Secondary School Certificate Examination (JSSCE) in Edu Local Government Area (LGA) of Kwara State, Nigeria. The research design was correlational for which the t-test and one -way analysis of variance (ANOVA) were employed. The sample for the study consisted of all students who sat for the 2011, 2012 and 2013 JSSCE in six out of the eleven Junior Secondary Schools in the Local Government Area. The five schools were selected using the simple random sampling technique and all the 1,689 students who sat for the JSSCE in both subjects in the three years aforementioned were used for the study. The scores of students in both Social Studies and Integrated Science were obtained directly from the Junior Secondary School Certificate Examination result sheets from Principals of the selected schools. These were used as measures of academic performance. The data collected were analyzed using the descriptive statistics, t-test and one-way Analysis of Variance (ANOVA). The result revealed that there existed significant differences in the performances of male and female students in both Social Studies and Integrated Science in year 2011 with female students out performing their male counterparts however, there are no significant differences in male and female students' performance in the two subjects in years 2012 and 2013.The multiple comparisons revealed that the scores of students in Social Studies were significantly different between years 2011 and 2012/2011 and 2013 as well as between 2012 and 2013. In the same vein, the scores of students in Integrated Science for 2011 and 2012 as well as 2011 and 2013 were found to be significant.

2015 Dr. M. Panneerselvam and Dr. M. Muthanuzhselvan had investigates, one of the chief objectives of education is the development of desirable attitudes in the students. It is, therefore, observable that the teachers must understand the various dimensions of an attitude. It is also to be kept in view that we are required to develop several attitudes in the students like attitude towards studies, attitude towards self, attitude towards colleagues, attitude towards certain ideals, etc. Attitude is purely a psychological concept. From psychological point of view it is difficult to discriminate attitude from other psychological concepts like interest, aptitude or appreciation. Still, it is defined as the readiness of mind to respond to an object person or a situation. It is something that is learned by an individual as he learns many other things in life. Attitude is an orientation or disposition or a sort of readiness to react in a certain way. Which an individual carry with him in a sort of latent form and it may become manifest in an individual's behavior only when an occasion arises. When an individual has to express his attitude, he may react to them in a predetermined manner either favorably or unfavorably or in different manner. This study attempts to know the relationship of achievement in science and scientific attitude among students and the found result from this study was that there is no significant relationship in achievement in science and scientific attitude.

2015 Madiha Rauf & Sarah Shahed had investigated a study regarding the topic of gaining importance among psychologists and researchers to understand the ways of learning of Science concepts and particularly recognizing factors which cause retention of science concepts in students. The present study was carried out to assess the influence of socio-economic status of family and other variables on understanding of scientific concepts in secondary school students from districts of Punjab Province. The sample size of this study was 720 enrolled male and female students of class 9th selected by using purposive sampling from the public schools in six districts covering the central, southern and northern region of the Punjab province. For data collection two types of instruments were administered to the subject of the study; The Science
Concept Acquisition Test and self-constructed questionnaire regarding demographic
and other variables. The collected data were analyzed by using t-test, ANOVA and

correlation. The obtained results were as follows; the socioeconomic variables of parents did not show noticeable impact on students 'performance whereas family structure, family size showed the noteworthy influence on the students' performance. In this study no correlation was found between study hours and test scores, however, a negative correlation existed with the domestic working and TV watching hours. In the future, it is suggested that parents should create and promote the conducive environment for getting better understanding of science education in students at home.

2015 James Muchwe King had conducted, Available evidence indicates that despite previous efforts, performance in science subjects is still very poor among secondary school students. This study sought to investigate factors that contribute to poor performance in science subjects among students in secondary schools in Tanzania. The study employed a cross-sectional research design whereby a total of 58 students from five schools in Kawe division were involved. Data collection was achieved through the use of questionnaires and structured interviews. Microsoft excels and SPSS were the tools used to analyses the data collected. The main findings of this study showed that among many other reasons the common reasons that contribute to poor performance are poor methodology in science education, negative attitude towards science subjects among students and lack of resources such as textbooks and well-equipped laboratories. Teachers should regularly attend the in-service training in order to equip themselves with new and modern methodology of teaching science subjects. It is recommended that the government and private school owners must ensure that the schools are well equipped with necessary materials, teachers should use modern methods of teaching science subject in order to motivate and sustain students interests in science subjects.

2015 Srivastava studied the influence of scientific interest, scientific attitude and intelligence on achievement in science at secondary school level and it was revealed that achievement in science has positive correlation with scientific attitude, intelligence and scientific interest. The high levels of intelligence, scientific attitude and scientific interest enable a student to achieve higher and science achievement can be predicted by intelligence and scientific interest.

2015 Nayak conducted a descriptive study to gauge the scientific attitude of undergraduate students (sample size 90) in relation to gender and stream of study and found a significant difference in scientific attitude in the favour of science stream students in comparison to arts and commerce stream students. Also, the scientific attitude didn't differ significantly with respect to gender however female students of science and commerce streams had more favorable attitude on the different attributes of scientific attitude than their counterparts of same stream. A significant difference in the scientific attitude with respect to the stream of study was found as commerce students possessed more favourable attitude on some attributes of scientific attitude like critical mindedness and ability to verify, in comparison to their counterparts in science and arts streams but scientific attitude on curiosity, suspended judgment, open mindedness and objectivity as attributes had no significant effect with respect to the stream of study.

2016 Tekalign Kejela Geleta had investigates, Science laboratories have a paramount role in teaching and learning process of practical activities. Descriptive survey method was used to investigate the upshot of the availability and the extent of use of available biology, chemistry and physics laboratory inputs on students' academic achievement in high schools of the Ilu Abba Bora Zone, Southwestern Ethiopia. Multistage cluster sampling technique was used to select randomly a total of 408 students and 100 teachers from 12 high schools. Questionnaire, science laboratory input checklist and student result data sheet were used to gather data for study. This study indicates that, shortage and ineffective use of science laboratories in the high schools correlates with poor achievements of students in standardized Ethiopian General School Leaving Certificate Examination (EGSLCE). The less availability, improper handling of available resources and the improper use of science laboratory items lead to the wastage of resources, less effectiveness of science laboratories and lower academic achievement of students in the high schools of the Ilu Abba Bora Zone, Southwestern Ethiopia.

2016 Pallavi Amitava Banerjee had conducted; Socio-economic hardships put children Ln an underprivileged position. This systematic review was conducted to identify factors linked to underachievement of disadvantaged pupils in school science and math. What could be done as evidence-based practice to make the lives of these young people better? The protocol from preferred reporting items for systematic reviews and meta-analyses (PRISMA) was followed. Major electronic educational databases were searched. Papers meeting pre-defined selection criteria were identified. Studies included were mainly large-scale evaluations with a clearly defined comparator group and robust research design. All studies used a measure of disadvantage such as lower SES, language barrier, ethnic minority or temporary immigrant status and an outcome measure like attainment in standardized national tests. A majority of papers capable of answering the research question were correlational studies. The review reports findings from 771 studies published from 2005 to 2014 in English language. Thirty-four studies were synthesized. Results suggest major factors linking deprivation to underachievement can be thematically categorized into a lack of positive environment and support. Recommendations from the research reports are discussed.

2017 Mary C.Oliver, Amanda Woods and Andrew McConney Prompted by fewer females compared to males enrolling in physics and advanced mathematics at both secondary and university levels, our research investigated the views and experiences of female students currently studying upper secondary school physics. We interviewed 18 female students about influences they considered important to their own science education, interest in science, and future science-related aspirations. Our purpose was to identify the experiences that these students most strongly associated with the generation and maintenance of their engagement in science, particularly represented in this research by their enrolment in upper secondary physics. The research team used a systematic, iterative process to identify main themes in the transcribed interview data. We identified the influence each girl reported as the strongest (ranked first). We also combined *all* influences that the participants had nominated, regardless of their ranking, to further examine all factors participants suggested as influential in their sustained engagement in school science (represented by their decision to study upper secondary physics). Systematic analysis of the interview data confirms that the influences on these females' choices to study physics at upper secondary originate from a combination of their teachers, their school's science culture, and members of their family, the participants themselves and their peers. The interviews highlighted the idiographic complexities in understanding the wide range of important influences on these students studying physics at upper secondary school and their engagement in science. The unique contribution of this work is giving voice to the participants and reflecting on what these high-achieving females have to say about the influential factors in their decisions to pursue science. Supportive teachers and the school science culture play essential roles, and other cultural and/or social factors such as family members and peers are identified as important. References to the culture and expectations of the school, family holidays, and conversations with siblings are support factors that seem to interact and overlap. At the same time, the importance of policy-amenable factors such as competent and caring science teachers, and science-supportive school cultures should be emphasized and encouraged.

2017 Dr. D. Vinodh Kumar and R. Pankajam had conducted, the present study intended to find out the level of Social Intelligence and Achievement in Science among Higher Secondary School Students. This study belongs to Survey Method. The size of the sample in the study was 300 Higher Secondary School Students who were selected through Random Sampling Technique. The investigators had used Social Intelligence Scale developed by Baskaran. P and Anandan. K (2011) and Achievement Test in Science (ATS) developed by the Investigators. The Statistical techniques used in this study were Mean, Standard deviation, t' test and Correlation to analysis the data. It was inferred that there is significant relationship between Social Intelligence and Achievement in science among selected High School Students.

2017 Mohammad Faaz & Zebun Khan had conducted a study aiming to find out the impact of attitude towards science on academic achievement of the students belonging to upper primary stage. For this purpose a sample consisting of 120 students from class VII were taken from A.M.U schools by using Simple Random Sampling Technique. Attitude towards Science Scale developed by Dr. Anuradha Agnihotri (2009) was used for data collection purpose. Marks obtained by the students in the previous class were used as an indicator of their academic achievement. Data was analyzed by using Karl Pearson Product Moment Correlation Coefficient and t-test. The findings of the study revealed the fact that there exists a moderate and positive relationship between attitude towards Science and Academic achievement of students at Upper Primary stage. Also, the study showed that academic achievement varies according to the variation in attitude towards Science Students.

2017 Kah-Eng Chua and Mageswary Karpudewan had made on, Attitude towards learning science is a well-researched domain for more than four decades. Globally, studies on attitude still stay relevant following the decline in enrollment in science-related studies across many levels. Particularly, emergent of new sciences in this century calls for a shift in the content included in school science, to be more contemporary. Hence, there is a need to inculcate an appropriate attitude to learn the new content. Many factors contribute to the development of attitude, in particular, motivation in learning the subject and the environment constitute learning the subject is imperative. In school science, investigating science laboratory environment is essential. Following this claim, in this study, an attempt was made to articulate the relationship between lower secondary school students' perceptions about laboratory environment, attitude, and motivation towards learning. For this purpose, in this quantitative survey, a total of 1003 lower secondary students between 13-15 years old from different schools in the Northern Region of Malaysia have participated. The result shows that motivation and perceptions of the learning environment are two factors that predict attitude towards learning science. These findings suggest that in designing teaching strategies, teachers need to consider how the teaching can affect the motivation and learning environment. Subsequently, the teaching strategies anticipated to influence students' attitude towards learning science.

2017 Susan Polirstok pointed that, this article examines the academic performance of secondary school students from the perspectives of grit and mindset through a detailed review of the literature. What makes a learner resilient? Persistent? Willing to take on academic challenges? The research on grit and mindset provides an understanding of why many secondary students struggle academically. Whereas Duckworth discusses persistence and resilience, Dweck compares fixed versus growth mindsets, the willingness to take on academic challenges and belief in oneself as a learner. Teaching strategies and materials that can help students increase persistence and build a growth mindset are presented as keys to successfully affecting academic performance.

2017 Dr. Rajwinder Kaur observed that, Science is a dynamic, expanding body of knowledge covering ever new domains of experience. The methodology of science and its demarcation from other fields continue to be a matter of philosophical debate. Its professed value neutrality and objectivity have been subject to critical sociological analyses. This study was conducted to study effectiveness of inductive and deductive method of teaching on achievement in science of secondary school students. For this purpose, a sample of 100 students was taken from schools of Ferozepur district. A self-made Achievement test was used both as pretest and posttest for control and experimental groups. After analyzing the data, it was found that there was significant difference between inductive method, and traditional group on achievement in science of secondary school students. The inductive method allowed more effective interaction between the students and enabled the learner to participate successfully in the learning process. There was a significant difference between deductive method and traditional method on achievement in science of secondary school students. Deductive method is simple for the students as they get a readymade key to solve the relevant problems. There exists no significant difference in achievement in science of secondary school students when taught with inductive method and deductive method.

2017 Ado ABDU Bichi, Hadiza Hafiz and Samira Abdullahi had conducted a study regarding the topic of Science Education is believed to be a vital tool for individual and societal development at large. The persistent low levels of students' achievement in science at the various public examinations in Nigeria have continued to draw the attention of major stakeholders in education. This study examined academic achievement of Senior Secondary students in science subjects, the relationship between the three subjects: Physics, Chemistry and Biology and gender difference in students' achievement were examined. Ex-post facto design of descriptive research was adopted for the study. A proforma was used to collect data from a sample of three hundred (378) students, selected using stratified random sampling procedure from the science of Secondary schools in Kano state of Nigeria. The data collected were the students' performances in three science achievement tests. The data collected were analysed using descriptive statistics, Pearson Product Moment Correlation Coefficient (r) and independent-Sample t-test. Overall results exhibited that students performed above average (M=55.10, SD=14.256, 55.10%) and a significant correlation exists between students achievement in the three key science subject r (376)=0.763, r (376)=0.781, r= (376)= 0.714. Similarly, gender difference exists in science achievement. The implication of this findings is that, though students' science achievements are satisfactory and generally encouraging, there are distinguishing differences in the cognitive, affective and psychomotor skills of students with respect to gender. It is recommended among others that, teachers should encourage students to manage their own learning, engage in cooperative tasks in order to improve their academic achievement in science and minimize gender disparity in students' achievement.

2017 Amit Ahuja observed that, in science education, teaching methodologies focusing on developing scientific attitude among students facilitate them in scoring academically high and thus scientific attitude may work as determinant of academic performance of students. A descriptive survey was conducted on 208 students of secondary school students in Delhi. The data analysis showed that there was gender difference, in the favour of girl students, with respect to scientific attitude and science achievement scores. A significantly positive co relation between scientific attitude and science achievement scores of students was found. Interaction effects also supported these findings.

Focused Studies:

2013 Chandra conducted a Study on Achievement in Science through Rastriya Madhyamik Shiksha Abhiyan (RMSA) among the students of Standard IX, which is a survey research and carry out 195 students have been selected by random sampling from the schools. The major findings of the study were –

1. ***i.*** The girl students are having significantly higher level of achievements in science through RMSA than the boys.
2. ***ii.*** Urban Students are having significantly higher level of achievements in science through RMSA than Rural Students.

2019 Shil conducted a Study on the achievement of students in Madhyamik Examination in the subject science in Unokoti District, Tripura, where the study has been conducted with the sample size of 200 Madhyamik Candidates out of which 100 are Boys Students and 100 are girls Students. The finding of the study revealed that the girl candidates in Madhyamik have better achievement in science than the Boy students and the rural candidates are at per with the urban candidates in Madhyamik in terms of achievement.

Chapter III - Methodology of the Study

3.1 INTRODUCTION

The Research Design is a comprehensive master plan of the research study to be undertaken. Simply stated, it is the framework, a blueprint for research study, which guides the collection and analysis of data. It's the plan of action, plan of collection and plan of analysis of data in an economic, efficient and relevant manner. As quoted by Claire Sellitz, "A good Research Design shall ensure that the information obtained is relevant to the problem and that it was collected by objective and economic procedures. The importance of research design lies in the fact that it makes a statement of what is to be done. It is an expression of what is expected of the research exercise in terms of results and analytical input needed to convert data into research findings. The research procedure includes explaining the various hypotheses framed for verification in the present and sampling techniques used the reasons for selection of the sample according to different variables. The selection of the tools includes the description of the tool selected, testing its suitability for the present study and the procedure followed in administering the tool to collect data.

3.2 METHOD OF THE STUDY

The Presented Research, Descriptive Survey Method has been used for collection of relevant data. Survey Method is commonly used in Educational Research to study the existing conditions and phenomenon. Survey may be conducted in two different ways, i.e. Census Survey, where the researcher covers the entire universe of the study and Sample Survey, in which only a valid part of the whole group will be studied.

The Presented Research has been conducted based on the sample survey statistics of the TRIPURA BORAD OF SECONDARY EDUCATION (TBSE) of the state TRIPURA, where the recent 08 batches of candidates of both public examinations conducted under the TRIPURA BORAD OF SECONDARY EDUCATION (TBSE) since 2010 are purposively selected.

The prime raw data of the collected information were the base for real time analysis. The analysis of data involves identifying the relations of quantified information to the research problem. Researcher have to use different tools such as MEAN, MEDIAN, MODE and primely focused the PERCENTAGES for analyzing the data quantitatively and establishing a relationship between the information or Sample Survey Statistics gathered and the research problem.

Research Method

Descriptive Sample Survey Method will be adopted for the present study.

3.3 POPULATION OF THE STUDY

A Population/Universe refers to any collection of individuals or of their attributes, of results of any operation that can be numerically specified or specified groups of human being or non-human being entities such as object, educational institution, times units, geographical areas, prices of wheat or salaries drawn by individual.

A Population containing a finite number of individual, members or units is called a FINITE POPULATION and a Population containing infinite number of individual, members or units is known as INFINITE POPULATION.

Secondary Education Boards in India are responsible towards conduction of Both Secondary and Higher Secondary Public Examinations to declare a batch of students about the completion of their school education. There are many Secondary Education Boards in India to perform the said responsibility including one recognized Central Board of Secondary Education (CBSE). In the State Tripura, the TRIPURA BORAD OF SECONDARY EDUCATION is involved to conduct the Secondary (Madhyamik) and Higher Secondary (HS) Public Examination. The target of population included all batches of candidates under gone to the said examinations conducted by the TRIPURA BORAD OF SECONDARY EDUCATION.

The population of the present study is all the batch wise (10/+2) students enrolled as candidates, who appeared in Madhyamik at secondary level and then Higher Secondary (+2 Stage) Board examination after consecutive next second year (+2 Years) from the whole State of Tripura and under the Tripura Board of Secondary Education (TBSE) for last (1978-2019) 41 years or last four decades.

All concern batch of students during academic session Madhyamik 1978 & HS 1980 to Madhyamik 2017 & HS 2019 will constitute the population of the present study.

During the aforesaid academic session begins with the first examination conducted by the TBSE on 1978 to touch point of 2020, there are 41 Batch, who had been under gone to the Public Examination process conducted by the Tripura Board of Secondary Education (TBSE).

Accordingly, In the present study, Average 32950 enrolled students of each 41 batch had been under gone to the board examinations under the Tripura Board of Secondary Education (TBSE).
Hence, in the present study, the population for the study may be regarded of average 32963.75 students for previous 41 years, which results 32963.75x41=13,51,513.75 i.e. **13.5 lacs student's population.**

3.4 SAMPLE AND SAMPLING OF THE STUDY

Sampling is the act, process or technique of selecting a suitable and relatively small amount or number of individual or a representative part of population for the purpose of determining parameters or characteristics of the whole population to analyze in order to make some generalization about the entire population.

In present study, researcher also divides his population into different characteristics, employing the method of purposive sampling, which is known from previous research or theories to be related to the phenomenon under investigation and from each of the smaller homogenous group failing in each characteristic, researcher draws purposively a predetermined number of units.

Systematic sampling or Quasi-Random sampling and even Convenience Sampling method will be followed to draw the sample from the target population.

Sampling

Simple random and Convenience sampling will be used for this study.

In the present study, it is proposed to draw only **08 Batch**, who had been under gone to both the Board Examination i.e. Secondary or Madhyamik and thereafter with in the schedule frame time the Higher Secondary.

The concern 08 batch from 2010/2012 to 2017/2019 each under the Tripura Board of Secondary Education (TBSE) has been considered through systematic sampling method. Hence, the average sample for the study will be regarded of average 32963.75 students for previous 08 years, which results 32963.75x8=2,63,710 i.e. **2.6 lacs student's sample.**

Table – 3.4.1 : The distributions of sample are given below: -

Sl.	Batch	Year (Secondary & HS Examination)	Sample - Enrolled Candidates (Secondary Examination)
01	**01**	**2010-2012**	**31609**
02	**02**	**2011-2013**	**29800**
03	**03**	**2012-2014**	**31696**
04	**04**	**2013-2015**	**31854**
05	**05**	**2014-2016**	**32867**
06	**06**	**2015-2017**	**35759**
07	**07**	**2016-2018**	**32863**
08	**08**	**2017-2019**	**37262**
		Total Sample Batch (n)	**2,63,710**
		Average Sample Size (n/8)	**32963.75**
As a future scope o ther upcoming Batches, which are not sampled*: -			
		2018-2020*	**36072**
		2019-2021*	**33684**
		2020-2022*	**47412**

3.5 TOOLS OF THE STUDY

In order to collect evidence or data for the present study, the researcher has to make use of certain testing and non-testing tools, such as intelligence test, attitude test, achievement test, personality test etc. In Research work, there are two types of research tools: Standardized and Self-described. In present study, Researcher used the Standardized tools.

The open to all & authorized Result abstracts of different years secondary and higher secondary public examinations under the said BORAD.

The Batch wise (10/+2) Result Abstracts of the Board Examination of same batch i.e. Madhyamik (10+) and Higher Secondary (+2) Examination results conducted by the Tripura Board of Secondary Education (TBSE) will be considered and collected with an acknowledgement from the authority of the Tripura Board of Secondary Education (TBSE) for the study.

3.6 ADMINISTRATION OF TOOLS

First of all, before the collection of data the investigator contacts the authority of Tripura Board of Secondary Education (TBSE) and the websites concern to get the data exploring the purpose of the study under the magnanimities and kind guidance of respected guide along with other concern mentors and resource persons. The response of the authority concern would be kept confidential also according to the norms of the research done.

In the present study, the information for research has been collected considering the SECONDARY DATA sources i.e. Statistical abstract and information available with the Data-base Archives of Tripura Board of Secondary Education (TBSE), which scores better in compare to any primary data based on the reliability of information, adequacy of information and suitability of information.

3.7 STATISTICAL TECHNIQUES OF THE STUDY

The Research is a scientific systematic activity that involves the collection, processing, analyzing and interpreting of information relevant to the identified problem.

Statistics is the prime secondary data as the information of research, which has to be processed focusing the methodologies of editing, coding, tabulation, classification, quantification considering the basics of explanation, description and comparison of phenomena.

As per the nature of the Secondary Data the researcher used different descriptive statistics.

Under the Descriptive Statistics: -

In the present study, the Major Statistical Tool towards Measures of Central Tendency that are used to measure the extent to which the observed information (Quantified) is centered around the middle value. It calls for an averaging of the general content of the present study.

1) PERCENTAGES (or RATE)

- Percentages are special kinds of ratios that express the relationship of one variable in comparison to another. It is a way of representing a number as a fraction of 100. Percentages may also be found useful in comparing relative terms such as profit, gain, sales and success, etc. The use of percentages often makes it easier to compare values and fractions that do not have a common denominator (a number divisible by both the bottom numbers). Percentages with a common base can provide meaningful interpretations from the information analyzed.

2) MEAN

- Mean, the average of the quantified observations is made use of, in many of the research analysis. The mean is the most commonly used measure of central tendency. The mean refer to the “average”, which is simply the sum of the values divided by the total number of items in the set. The result is referred to as the Arithmetic Mean.

3) MEDIAN

- Median, the middle value in the ordered list observations may also found to be useful in certain studies. The median is determined by sorting the data point in the middle of the sequence.

4) MODE

- Mode, the most frequently occurring value in the observations has got a great sense for analysis purpose.

All the descriptive statistics are calculated by the researcher own-self and also by the Microsoft Excel version 2020.

1) Bar Graphs

- Bar diagram is the method of representing data through graphical representations. Especially, when the data are classified into some characteristics on the basis of a trait, time or class at the time Bar diagram is the appropriate method of graphical representation. In this present study, Bar Diagram is used to show the level of achievements of same batch of students in HS Examination compare to Secondary under TBSE in Tripura.

3.8 METHODOLOGICAL VALUES

The learning management to the Science Education reveled through the tools of results of public examinations. The outcome is confirmed with the facts and "open to all" statistical status of Secondary and Higher Secondary Examination conducted by the Tripura Board of Secondary Education (TBSE). The students who have chosen the science stream in the Higher Secondary level has shown the mental determination and finally to appear in the Higher Secondary level, has been recognized as a group, who has the better understanding of Science & the better responder over the Science Education indeed. Even the students appear in other streams apart from Science in Higher Secondary level may be abstractly considered as the drop-out pupil to the Science Education too.

Chapter IV - Analysis and Interpretation

4.1 INTRODUCTION

The Data Analysis and Interpretation in this chapter is the heart of the Research Work. It may either be presented in separate chapters or may be integrated and presented in single chapter.

The Secondary Data has to be presented first through the process of analysis and then further it should be classified and processed. After processing of the classified data, Researcher designed the data and analyzed according to the Major and Minor Objective to get the research findings.

The analysis and interpretation of data involve the objective material in the possession of the researcher and the subjective reactions and desires to be derived from the data. Analysis of data means studying the tabulated materials in order to determine inherent facts or meaning. In involves breaking down the existing complex factors in to simple parts and putting the parts together in new arrangement for purpose of interpretation. Data analysis provides a general depiction of the types of statistics used in research work. It also includes a variety of statistical procedures for describing a group subject.

In the present study, an attempt had been made for the ever-first time to analysis in terms of comparison of the Academic Achievement of same batches of students undergoing both the Secondary and Higher Secondary Examination conducted by the Tripura Board of Secondary Education (TBSE). To achieve the research result, different parametric and non-parametric techniques may be used for analysis the hypotheses. Different statistics also been used in the present study for analysis and interpretation.

The outcome information, methodologically, obtained from the collected data was described to suitable statistical analysis in order to arrive at definite conclusions in the light of targeted objectives.

4.2 DATA ANALYSIS AND INTERPRETATION –

Part – Presentation of Secondary Data

The Secondary Data submitted by the researcher here for Comprehensive, Comparative and Cumulative analysis the status on achievement of same batch of students in HS Examination compare to the Madhyamik or Secondary Examination under Tripura Board of Secondary Education (TBSE) in Tripura, has been collected from the open to all source of the Tripura Board of Secondary Education (TBSE).

The researcher acknowledges the magnanimity of the Tripura Board of Secondary Education (TBSE) for supportive manner in providing the official records for the successful submission of the research work, which may also be a suggestive to the Tripura Board of Secondary Education (TBSE) for their future action plan towards a better educational management.

TABLE – 4.2.1

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board of Secondary Education
(Source: Tripura Board Of Secondary Education - WEB SITE)

	Regular Batch 1		**Batch 2**		**Batch 3**	
	Secondary 2010	**Higher Secondary 2012**	**Secondary 2011**	**Higher Secondary 2013**	**Secondary 2012**	**Higher Secondary 2014**
Enrolled	**31609**	**17321**	**29800**	**17206**	**31696**	**19165**
Absentees	**109**	**100**	**92**	**72**	**95**	**93**
Appeared	**31500**	**17221**	**29708**	**17134**	**31601**	**19072**
Expelled	**2**	**1**	**1**	**3**	**1**	**1**
Reported Against	**4**	**0**	**0**	**2**	**0**	**0**
Result Withheld	**0**	**0**	**0**	**0**	**1**	**0**
Result Incomplete	**0**	**0**	**0**	**0**	**0**	**0**
1st Division (above 60%)	**1722**	**1114**	**2040**	**1300**	**2123**	**1328**
2nd Division (above 50%)	**2564**	**3908**	**2704**	**4320**	**3042**	**4382**
3rd Division	**14629**	**7911**	**13697**	**8022**	**15006**	**8939**
P Division	**0**	**0**	**0**	**0**	**0**	**0**
Passed	**18915**	**12933**	**18441**	**13642**	**20171**	**14649**
% of Pass	**60.05**	**75.10**	**62.07**	**79.62**	**63.83**	**76.81**

TABLE – 4.2.2

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board of Secondary Education (Source: Tripura Board of Secondary Education WEB SITE)		
	Batch 4	
	Sec. 2013	H. Sec 2015
Enrolled	31854	22419
Absentees	103	119
Appeared	31751	22300
Expelled	3	5
Reported Against	1	0
Result Withheld	0	0
Result Incomplete	0	0
1st Division (above 60%)	2319	1813
2nd Division (above 50%)	3639	5863
3rd Division	15120	10403
P Division	-	0
Passed	21078	18079
% of Pass	66.39	81.07

TABLE – 4.2.3

	Batch 5					Batch 6				
	Sec. 2014 *Not verified	Higher Secondary 2016				Sec. 2015	Higher Secondary 2017			
		Sci	Arts	Com	Total		Sci	Arts	Com	Total
Enrolled	32867*	3319	16977	845	21141	35759	3377	16958	808	21143
Absentees	0*	0	0	0	0	158	0	0	0	0
Appeared	32867	3319	16977	845	21141	35601	3377	16958	808	21143
Expelled	NA	0	3	0	3	2	0	2	0	2
Reported Against	NA	0	0	0	0	0	0	0	0	0
Result Withheld	NA	0	0	0	0	0	0	0	0	0
Result Incomplete	NA	0	0	0	0	0	0	0	0	0
1st Division (above 60%)	NA	NA*(GRADING INTRODUCED)				3163	NA			
2nd Division (above 50%)	NA	NA*				4521	NA			
3rd Division	NA	NA*				15957	NA			
P Division	NA	NA*				-	NA			
Passed	22607	2702	12569	607	15878	23641	2829	12924	592	16345
% of Pass	68.78	81.41	74.04	71.83	75.10	66.41	83.77	76.21	73.27	77.31

TABLE – 4.2.4

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board Of Secondary Education
(Source: Tripura Board Of Secondary Education WEB SITE)

		Batch 7					Batch 8				
		Sec 2016	Higher Secondary 2018				Sec 2017	Higher Secondary 2019			
			Sci	Arts	Com	Total		Sci	Arts	Com	Total
Enrolled		32863	3028	16543	847	20418	37262	3358	18394	686	22438
Absentees		122	0	0	0	0	140	0	0	0	0
Appeared		32741	3027	16542	847	20416	37122	3358	18394	686	22438
Expelled		0	0	2	0	2	0	0	0	0	0
Reported Against		0	1	1	0	2	0	0	0	0	0
Result Withheld		0	0	0	0	0	0	0	0	0	0
Result Incomplete		0	0	0	0	0	0	0	0	0	0
1st Division (above 60%)	AA (above 90%)	2465	NA				4329	34	3	0	37
	A+ (above 80%)							293	116	4	413
	A (above 60%)							1728	2699	92	4519
2nd Division (above 45%)	B+ (above 50%)	3788	NA				5523	809	3303	142	4254
3rd / P Division (above 34%)	B (above 35%)	15403	NA				15159	124	8315	298	8737
	C (above 30%)		NA					0	104	0	104
Un-successful	D (below 30%)	-	NA				-	370	3854	150	4374
Passed		21656	2552	12931	569	16052	25011	2988	14540	536	18064
% of Pass		66.14	84.31	78.17	67.18	78.61	67.38	88.98	79.05	78.13	80.50

TABLE – 4.2.5

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board Of Secondary Education
(Source: Tripura Board Of Secondary Education WEB SITE)

	Batch 9					Batch 10				
	Sec. 2018	Higher Secondary 2020				Sec. 2019	Higher Secondary 2021			
		Sci	Arts	Com	Total		Sci	Arts	Com	Total
Enrolled	36072	-	-	-	-	33684	-	-	-	-
Absentees	146	-	-	-	-	101	-	-	-	-
Appeared	35926	-	-	-	-	33583	-	-	-	-
Expelled	0	-	-	-	-	0	-	-	-	-
Reported Against	0	-	-	-	-	1	-	-	-	-
Result Withheld	0	-	-	-	-	0	-	-	-	-
Result Incomplete	0	-	-	-	-	0	-	-	-	-
AA (above 90%)	182	-	-	-	-	224	-	-	-	-
A+ (above 80%)	697	-	-	-	-	961	-	-	-	-
A (above 60%)	3542	-	-	-	-	4934	-	-	-	-
B+ (above 50%)	3916	-	-	-	-	5197	-	-	-	-
B (above 35%)	10822	-	-	-	-	9807	-	-	-	-
C (above 30%)	2249	-	-	-	-	571	-	-	-	-
D / Un-successful (below 30%)	-	-	-	-	-	-	-	-	-	-
Passed	21408	-	-	-	-	21694	-	-	-	-
% of Pass	59.59	-	-	-	-	64.60	-	-	-	-

4.3 DATA ANALYSIS AND INTERPRETATION

Part – Extracting Batch wise Resource Data for Analysis

In the present study, Research starts with data collection and complied all the secondary data according to the need of the research work to resolve the statement of problem and aiming the objectives of the present study.

This present part of the chapter is the representation of the compilation of collected Secondary Data according to the research design to achieve the utmost research outcome to meet the objectives and the hypotheses.

Table analysis 4.3.1 of Batch 1 – 2010/2012

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board Of Secondary Education			
	Regular Batch 1		
	Sec 2010	**H.Sec 2012**	**Analysis**
Enrolled	**31609**	**17321**	**To this Batch,** **1. HS enrollment is 91.57% of Madhyamik achievement.** **2. HS enrollment is 54.79% of Madhyamik enrolment.** **3. HS achievement is 68.37% of Madhyamik achievement.** **4. HS achievement is 40.91% of Madhyamik enrolment.** **5. HS 1st div is 03.52% of Madhyamik enrolment.**
1st Division (above 60%)	**1722**	**1114**	
2nd Division (above 50%)	**2564**	**3908**	
Passed	**18915**	**12933**	
% of Pass	**60.05**	**75.10**	

Table analysis 4.3.2 of Batch 2 – 2011/2013

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board Of Secondary Education			
	Regular Batch 2		
	Sec 2011	**H.Sec 2013**	**Analysis**
Enrolled	**29800**	**17206**	**To this Batch,** **1. HS enrollment is 93.30% of Madhyamik achievement.** **2. HS enrollment is 57.74% of Madhyamik enrolment.** **3. HS achievement is 73.98% of Madhyamik achievement.** **4. HS achievement is 45.78% of Madhyamik enrolment.** **5. HS 1st div is 04.36% of Madhyamik enrolment.**
1st Division (above 60%)	**2040**	**1300**	
2nd Division (above 50%)	**2704**	**4320**	
Passed	**18441**	**13642**	
% of Pass	**62.07**	**79.62**	

Table analysis 4.3.3 of Batch 3 – 2012/2014

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board Of Secondary Education			
	Regular Batch 3		
	Sec 2012	**H.Sec 2014**	**Analysis**
Enrolled	**31696**	**19165**	**To this Batch,** **1. HS enrollment is 95.01% of Madhyamik achievement.** **2. HS enrollment is 60.46% of Madhyamik enrolment.** **3. HS achievement is 72.62% of Madhyamik achievement.** **4. HS achievement is 46.22% of Madhyamik enrolment.** **5. HS 1st div is 04.89% of Madhyamik enrolment.**
1st Division (above 60%)	**2123**	**1328**	
2nd Division (above 50%)	**3042**	**4382**	
Passed	**20171**	**14649**	
% of Pass	**63.83**	**76.81**	

Table analysis 4.3.4 of Batch 4 – 2013/2015

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board Of Secondary Education			
	Regular Batch 4		
	Sec 2013	**H.Sec 2015**	**Analysis**
Enrolled	**31854**	**22419**	**To this Batch,** **1. HS enrollment is 106.36% of Madhyamik achievement.** **2. HS enrollment is 70.38% of Madhyamik enrolment.** **3. HS achievement is 85.77% of Madhyamik achievement.** **4. HS achievement is 56.75% of Madhyamik enrolment.** **5. HS 1st div is 05.69% of Madhyamik enrolment.**
1st Division (above 60%)	**2319**	**1813**	
2nd Division (above 50%)	**3639**	**5863**	
Passed	**21078**	**18079**	
% of Pass	**66.39**	**81.07**	

Table analysis 4.3.5 of Batch 5 – 2014/2016

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board Of Secondary Education					
	Regular Batch 5				
	Sec. 2014 *Not verified	Higher Secondary 2016			
		Sci	Arts	Com	Total
Enrolled	32867*	3319	16977	845	21141
Absentees	0	0	0	0	0
Appeared	32867	3319	16977	845	21141
1st Division (above 60%)	NA	NA*(GRADING INTRODUCED)			
2nd Division (above 50%)	NA	NA*			
Passed	22607	2702	12569	607	15878
% of Pass	68.78	81.41	74.04	71.83	75.10
Analysis					

To this Batch,

1. HS enrollment is 93.52% of Madhyamik achievement.
2. HS enrollment is 64.32% of Madhyamik enrolment.
3. HS achievement is 70.23% of Madhyamik achievement.
4. HS achievement is 48.30% of Madhyamik enrolment.
5. HS 1st div is 0(NA)% of Madhyamik enrolment.
6. HS Sc Enrollment is 15.69% of HS Total Enrolment.
7. HS Sc Enrollment is 10.09% of Madhyamik Enrolment.
8. HS Sc achievement is 12.78% of HS Total Enrolment.
9. HS Sc achievement is 81.41% of HS Sc Enrolment.
10. HS Sc achievement is 08.22% of Madhyamik Enrolment
11. HS Hum Enrollment is 80.30% of HS Total Enrolment
12. HS Hum Enrollment is 51.65% of Madhyamik Enrolment.
13. HS Hum achievement is 59.45% of HS Total Enrolment
14. HS Hum achievement is 74.04% of HS Hum Enrolment
15. HS Hum achievement is 38.24% of Madhyamik Enrolment
16. HS Com Enrollment is 3.99% of HS Total Enrolment
17. HS Com Enrollment is 2.57% of Madhyamik Enrolment.
18. HS Com achievement is 2.87% of HS Total Enrolment
19. HS Com achievement is 71.83% of HS Com Enrolment
20. HS Com achievement is 1.85% of Madhyamik Enrolment
21. HS 1st div is 00(NA)% of Madhyamik 1st div

Table analysis 4.3.6 of Batch 6 – 2015/2017

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board Of Secondary Education					
	Regular Batch 6				
	Sec. 2015	**Higher Secondary 2017**			
		Sci	**Arts**	**Com**	**Total**
Enrolled	**35759**	**3377**	**16958**	**808**	**21143**
Absentees	**158**	**0**	**0**	**0**	**0**
Appeared	**35601**	**3377**	**16958**	**808**	**21143**
1st Division (above 60%)	**3163**	**NA**			
2nd Division (above 50%)	**4521**	**NA**			
Passed	**23641**	**2829**	**12924**	**592**	**16345**
% of Pass	**66.41**	**83.77**	**76.21**	**73.27**	**77.31**

Analysis

To this Batch,

1. **HS enrollment is 89.43% of Madhyamik achievement.**
2. **HS enrollment is 59.12% of Madhyamik enrolment.**
3. **HS achievement is 69.14% of Madhyamik achievement.**
4. **HS achievement is 45.71% of Madhyamik enrolment.**
5. **HS 1st div is 0(NA)% of Madhyamik enrolment.**
6. **HS Sc Enrollment is 15.97% of HS Total Enrolment.**
7. **HS Sc Enrollment is 09.44% of Madhyamik Enrolment.**
8. **HS Sc achievement is 13.38% of HS Total Enrolment.**
9. **HS Sc achievement is 83.77% of HS Sc Enrolment.**
10. **HS Sc achievement is 07.91% of Madhyamik Enrolment**
11. **HS Hum Enrollment is 80.20% of HS Total Enrolment**
12. **HS Hum Enrollment is 47.42% of Madhyamik Enrolment.**
13. **HS Hum achievement is 61.12% of HS Total Enrolment**
14. **HS Hum achievement is 76.21% of HS Hum Enrolment**
15. **HS Hum achievement is 36.14% of Madhyamik Enrolment**
16. **HS Com Enrollment is 3.82% of HS Total Enrolment**
17. **HS Com Enrollment is 2.26% of Madhyamik Enrolment.**
18. **HS Com achievement is 2.79% of HS Total Enrolment**
19. **HS Com achievement is 73.27% of HS Com Enrolment**
20. **HS Com achievement is 1.65% of Madhyamik Enrolment**
21. **HS 1st div is 00 (NA)% of Madhyamik 1st div**

Table analysis 4.3.7 of Batch 7 – 2016/2018

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board Of Secondary Education

		Regular Batch 7				
		Sec 2016	Higher Secondary 2018			
			Sci	Arts	Com	Total
Enrolled		32863	3028	16543	847	20418
Absentees		122	0	0	0	0
Appeared		32741	3027	16542	847	20416
1st Division (above 60%)	AA (above 90%)	2465	NA			
	A+ (above 80%)					
	A (above 60%)					
Passed		21656	2552	12931	569	16052
% of Pass		66.14	84.31	78.17	67.18	78.61

Analysis

To this Batch,

1. **HS enrollment is 94.28% of Madhyamik achievement.**
2. **HS enrollment is 62.13% of Madhyamik enrolment.**
3. **HS achievement is 74.12% of Madhyamik achievement.**
4. **HS achievement is 48.84% of Madhyamik enrolment.**
5. **HS 1st div is 0(NA)% of Madhyamik enrolment.**
6. **HS Sc Enrollment is 14.83% of HS Total Enrolment.**
7. **HS Sc Enrollment is 09.21% of Madhyamik Enrolment.**
8. **HS Sc achievement is 12.49% of HS Total Enrolment.**
9. **HS Sc achievement is 84.28% of HS Sc Enrolment.**
10. **HS Sc achievement is 07.76% of Madhyamik Enrolment**
11. **HS Hum Enrollment is 81.03% of HS Total Enrolment**
12. **HS Hum Enrollment is 50.34% of Madhyamik Enrolment.**
13. **HS Hum achievement is 63.33% of HS Total Enrolment**
14. **HS Hum achievement is 78.05% of HS Hum Enrolment**
15. **HS Hum achievement is 39.35% of Madhyamik Enrolment**
16. **HS Com Enrollment is 4.14% of HS Total Enrolment**
17. **HS Com Enrollment is 2.58% of Madhyamik Enrolment.**
18. **HS Com achievement is 2.78% of HS Total Enrolment**
19. **HS Com achievement is 67.18% of HS Com Enrolment**
20. **HS Com achievement is 1.73% of Madhyamik Enrolment**
21. **HS 1st div is 0(NA)% of Madhyamik 1st div**

Table analysis 4.3.8 of Batch 8 – 2017/2019

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board Of Secondary Education

		Regular Batch 8					
		Sec 2017	Higher Secondary 2019				
			Sci	Arts	Com	Total	
Enrolled		37262	3358	18394	686	22438	
Absentees		140	0	0	0	0	
Appeared		37122	3358	18394	686	22438	
1st Division (above 60%)	AA (above 90%)	4329	34	3	0	37	4969
	A+ (above 80%)		293	116	4	413	
	A (above 60%)		1728	2699	92	4519	
Passed		25011	2988	14540	536	18064	
% of Pass		67.38	88.98	79.05	78.13	80.50	

Analysis

To this Batch,

1. **HS enrollment is 89.71% of Madhyamik achievement.**
2. **HS enrollment is 60.22% of Madhyamik enrolment.**
3. **HS achievement is 72.22% of Madhyamik achievement.**
4. **HS achievement is 48.47% of Madhyamik enrolment.**
5. **HS 1st div is 13.33% of Madhyamik enrolment.**
6. **HS Sc Enrollment is 14.96% of HS Total Enrolment.**
7. **HS Sc Enrollment is 09.01% of Madhyamik Enrolment.**
8. **HS Sc achievement is 13.31% of HS Total Enrolment.**
9. **HS Sc achievement is 88.98% of HS Sc Enrolment.**
10. **HS Sc achievement is 08.01% of Madhyamik Enrolment**
11. **HS Hum Enrollment is 81.98% of HS Total Enrolment**
12. **HS Hum Enrollment is 49.36% of Madhyamik Enrolment.**
13. **HS Hum achievement is 64.80% of HS Total Enrolment**
14. **HS Hum achievement is 79.05% of HS Hum Enrolment**
15. **HS Hum achievement is 39.02% of Madhyamik Enrolment**
16. **HS Com Enrollment is 3.06% of HS Total Enrolment**
17. **HS Com Enrollment is 1.84% of Madhyamik Enrolment.**
18. **HS Com achievement is 2.39% of HS Total Enrolment**
19. **HS Com achievement is 78.13% of HS Com Enrolment**
20. **HS Com achievement is 1.44% of Madhyamik Enrolment**
21. **HS 1st div is 114.78% of Madhyamik 1st div.**

Table analysis 4.3.9-4.3.10 (Batch Data incomplete)

Batch wise Secondary & Higher Secondary Regular Students' Result Analysis under Tripura Board Of Secondary Education

	Batch 9 (Under Process)					**Batch 10 (Under Process)**				
	Sec. 2018	**Higher Secondary 2020**				**Sec. 2019**	**Higher Secondary 2021**			
		Sci	**Arts**	**Com**	**Total**		**Sc.**	**Arts**	**Com**	**Total**
Enrolled	**36072**	**-**	**-**	**-**	**-**	**33684**	**-**	**-**	**-**	**-**
Absentees	**146**	**-**	**-**	**-**	**-**	**101**	**-**	**-**	**-**	**-**
Appeared	**35926**	**-**	**-**	**-**	**-**	**33583**	**-**	**-**	**-**	**-**
AA (above 90%)	**182**	**-**	**-**	**-**	**-**	**224**	**-**	**-**	**-**	**-**
A+ (above 80%)	**697**	**-**	**-**	**-**	**-**	**961**	**-**	**-**	**-**	**-**
A (above 60%)	**3542**	**-**	**-**	**-**	**-**	**4934**	**-**	**-**	**-**	**-**
Passed	**21408**	**-**	**-**	**-**	**-**	**21694**	**-**	**-**	**-**	**-**
% of Pass	**59.59**	**-**	**-**	**-**	**-**	**64.60**	**-**	**-**	**-**	**-**

4.4 DATA ANALYSIS AND INTERPRETATION

Part – Comparison of Batch wise Resource Data for Analysis

The present research is the comprehensive cumulative and comparative study of the collected Secondary Data compiled in previous unit of the present chapter. In continuation of the present chapter researcher have to process all the secondary data into a recognized format to evaluate the aimed objective-based hypotheses of the research.

Table: Comprehensive Cumulative Comparative Batch-wise Achievement Analysis: 4.4.1

Batch 1 - 2010/2012 to Batch 8 - 2017/2019.

BATCH	***01*** ***2010/2012***	***02*** ***2011/2013***	***03*** ***2012/2014***	***04*** ***2013/2015***	***05*** ***2014/2016***	***06*** ***2015/2017***	***07*** ***2016/2018***	***08*** ***2017/2019***	***Avr./Mean***
Enrollment in Madhyamik (SAMPLE SIZE)	**31609**	**29800**	**31696**	**31854**	**32867**	**35759**	**32863**	**37262**	***(263710/8)*** ***32963.75***
HS enrollment is % of Madhyamik achievement.	***91.57***	***93.30***	***95.01***	***106.36***	***93.52***	***89.43***	***94.28***	***89.71***	***82.27***
HS enrollment is % of Madhyamik enrolment.	***54.79***	***57.74***	***60.46***	***70.38***	***64.32***	***59.12***	***62.13***	***60.22***	***61.14***
HS achievement is % of Madhyamik achievement.	***68.37***	***73.98***	***72.62***	***85.77***	***70.23***	***69.14***	***74.12***	***72.22***	***73.30***
HS achievement is % of Madhyamik enrolment.	***40.91***	***45.78***	***46.22***	***56.75***	***48.30***	***45.71***	***48.84***	***48.47***	***47.62***
HS 1st div is % of Madhyamik enrolment.	***03.52***	***04.36***	***04.89***	***05.69***	***NA***	***NA***	***NA***	***13.33***	***6.36***
HS Sc Enrollment is % of HS Total Enrolment.					***15.69***	***15.97***	***14.83***	***14.96***	***15.36***
HS Sc Enrollment is % of Madhyamik Enrolment.					***10.09***	***09.44***	***09.21***	***09.01***	***9.43***
HS Sc achievement is % of HS Total Enrolment.					***12.78***	***13.38***	***12.49***	***13.31***	***12.99***
HS Sc achievement is % of HS Sc Enrolment.					***81.41***	***83.77***	***84.28***	***88.98***	***84.61***
HS Sc achievement is % of Madhyamik Enrolment					***08.22***	***07.91***	***07.76***	***08.01***	***07.97***
HS Hum Enrollment is % of HS Total Enrolment					***80.30***	***80.20***	***81.03***	***81.98***	***80.88***
HS Hum Enrollment is % of Madhyamik Enrolment					***51.65***	***47.42***	***50.34***	***49.36***	***49.69***
HS Hum achievement is % of HS Total Enrolment					***59.45***	***61.12***	***63.33***	***64.80***	***62.17***
HS Hum achievement is % of HS Hum Enrolment					***74.04***	***76.21***	***78.05***	***79.05***	***76.84***
HS Hum achievement is % of Madhyamik Enrolment					***38.24***	***36.14***	***39.35***	***39.02***	***38.18***
HS Com Enrollment is % of HS Total Enrolment					***3.99***	***3.82***	***4.14***	***3.06***	***3.75***
HS Com Enrollment is % of Madhyamik Enrolment					***2.57***	***2.26***	***2.58***	***1.84***	***2.31***
HS Com achievement is % of HS Total Enrolment					***2.87***	***2.79***	***2.78***	***2.39***	***2.71***
HS Com achievement is % of HS Com Enrolment					***71.83***	***73.27***	***67.18***	***78.13***	***72.60***
HS Com achievement is % of Madhyamik Enrolment					***1.85***	***1.65***	***1.73***	***1.44***	***1.66***
HS 1st div is % of Madhyamik 1st div.								***114.78***	***114.78***

Table of Comprehensive Cumulative Comparative Batch-wise Achievement Analysis: 4.4.2

Batch 1 - 2010/2012 to Batch 8 - 2017/2019.

BATCH	***01 2010/ 2012***	***02 2011/ 2013***	***03 2012/ 2014***	***04 2013/ 2015***	***05 2014/ 2016***	***06 2015/ 2017***	***07 2016/ 2018***	***08 2017/ 2019***	***Avr./Mean***
Enrollment in Madhyamik (SAMPLE SIZE)	**31609**	**29800**	**31696**	**31854**	**32867**	**35759**	**32863**	**37262**	***(263710/8)*** ***32963.75***
Madhyamik PASS	***18915***	***18441***	***20171***	***21078***	***22607***	***23641***	***21656***	***25011***	***21440***
% of Madhyamik achievement.	***60.05***	***62.07***	***63.83***	***66.39***	***68.78***	***66.41***	***66.14***	***67.38***	***65.13***
HS Total PASS	***12933***	***13642***	***14649***	***18079***	***15878***	***16345***	***16052***	***18064***	***15705.25***
% of HS achievement	***75.10***	***79.62***	***76.81***	***81.07***	***75.10***	***77.31***	***78.61***	***80.50***	***78.02***
HS Sc PASS	***NA***	***NA***	***NA***	***NA***	***2702***	***2829***	***2552***	***2988***	***2767.75***
% of HS Sc achievement	***NA***	***NA***	***NA***	***NA***	***81.41***	***83.77***	***84.31***	***88.98***	***84.62***
HS Hum PASS	***NA***	***NA***	***NA***	***NA***	***12569***	***12924***	***12931***	***14540***	***13241***
% of HS Hum achievement	***NA***	***NA***	***NA***	***NA***	***74.04***	***76.21***	***78.17***	***79.05***	***76.87***
HS Com PASS	***NA***	***NA***	***NA***	***NA***	***607***	***592***	***569***	***536***	***576***
% of HS Com achievement	***NA***	***NA***	***NA***	***NA***	***71.83***	***73.27***	***67.18***	***78.13***	***72.60***

4.5 DATA ANALYSIS AND INTERPRETATION

4.5.1 Minor OBJECTIVE. 1

To study improvements of the candidate students of Tripura State in the higher secondary examination compare to their secondary examination conducted by the TBSE towards the achievement in science stream for last 08 batch.

Hypothesis -1: There will be a significant difference between the mean scores of candidate student of TBSE compare to Madhyamik and their Higher Secondary achievements with respect of science stream acceptance.

Table -1.1: Showing the Significance mean status of School level Science Educational achievements of same batch of students on different parameters in HS Examination compare to the Secondary (Madhyamik) Examination for last 08 Batches under Tripura Board of Secondary Education (TBSE) in Tripura.

BATCH	Enrollment in Madhyamik	HS 1st div is % of Madhyamik enrolment.	HS Sc Enrollment is % of HS Total Enrolment.	HS Sc Enrollment is % of Madhyamik Enrolment.	HS Sc achievement is % of HS Total Enrolment.	HS Sc achievement is % of HS Sc Enrolment.	HS Sc achievement is % of Madhyamik Enrolment	HS 1st div is % of Madhyamik 1st div.
01 2010/2012	31609	03.52	NA	NA	NA	NA	NA	NA
02 2011/2013	29800	04.36	NA	NA	NA	NA	NA	NA
03 2012/2014	31696	04.89	NA	NA	NA	NA	NA	NA
04 2013/2015	31854	05.69	NA	NA	NA	NA	NA	NA
05 2014/2016	32867	NA	15.69	10.09	12.78	81.41	08.22	NA
06 2015/2017	35759	NA	15.97	09.44	13.38	83.77	07.91	NA
07 2016/2018	32863	NA	14.83	09.21	12.49	84.28	07.76	NA
08 2017/2019	37262	13.33	14.96	09.01	13.31	88.98	08.01	114.78
Avr./Mean	(263710/8) 32963.75	6.36	15.36	9.43	12.99	84.61	07.97	114.78

Figure -1.1: Showing the Significance mean status of School level Science Educational achievements of same batch of students on different parameters in HS Examination compare to the Secondary (Madhyamik) Examination for last 08 Batches as statistically described in the table 1.1.

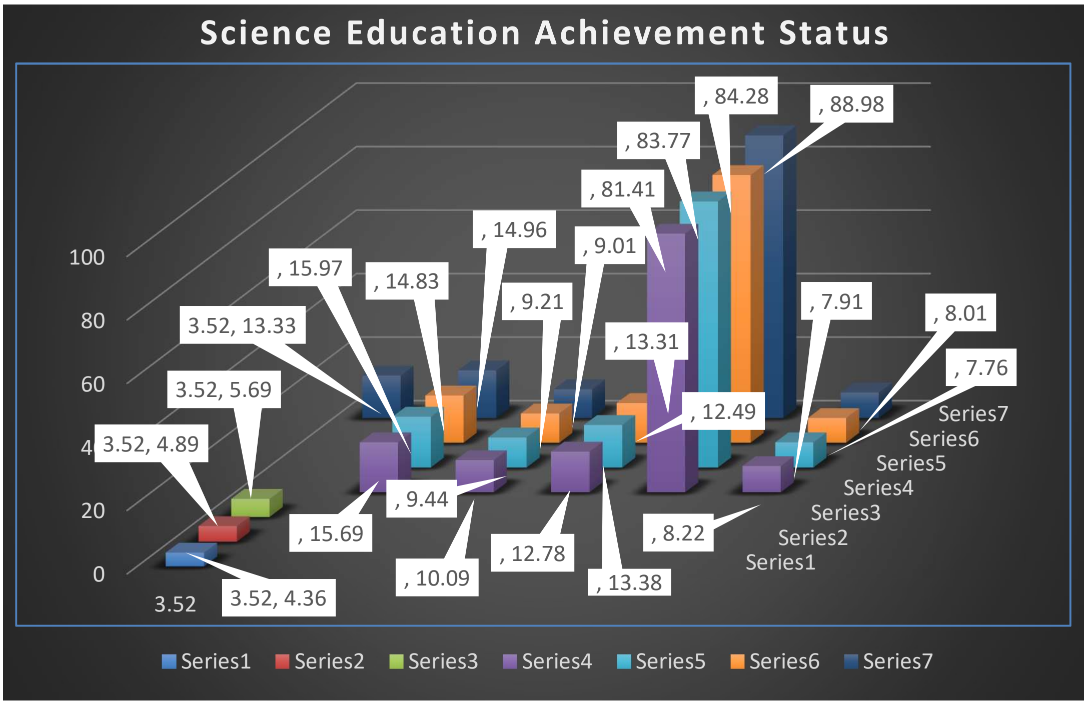
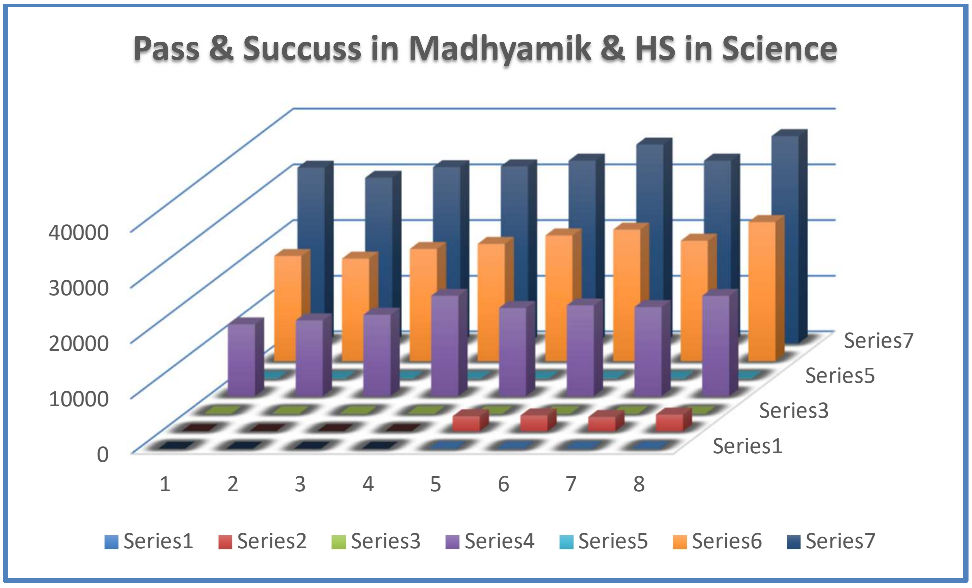


Table -1.2: Showing the Significance mean status of School level Science Educational achievements of same batch of students on basis of success and passed in HS Examination compare to the Secondary (Madhyamik) Examination for last 08 Batches under Tripura Board of Secondary Education (TBSE) in Tripura.

BATCH	*01* *2010/* *2012*	*02* *2011/* *2013*	*03* *2012/* *2014*	*04* *2013/* *2015*	*05* *2014/* *2016*	*06* *2015/* *2017*	*07* *2016/* *2018*	*08* *2017/* *2019*	*Avr./Mean*
Enrollment in Madhyamik (SAMPLE SIZE)	31609	29800	31696	31854	32867	35759	32863	37262	*(263710/8)* *32963.75*
Madhyamik PASS	*18915*	*18441*	*20171*	*21078*	*22607*	*23641*	*21656*	*25011*	*21440*
% of Madhyamik achievement.	*60.05*	*62.07*	*63.83*	*66.39*	*68.78*	*66.41*	*66.14*	*67.38*	*65.13*
HS Total PASS	*12933*	*13642*	*14649*	*18079*	*15878*	*16345*	*16052*	*18064*	*15705.25*
% of HS achievement	*75.10*	*79.62*	*76.81*	*81.07*	*75.10*	*77.31*	*78.61*	*80.50*	*78.02*
HS Sc PASS	*NA*	*NA*	*NA*	*NA*	*2702*	*2829*	*2552*	*2988*	*2767.75*
% of HS Sc achievement	*NA*	*NA*	*NA*	*NA*	*81.41*	*83.77*	*84.31*	*88.98*	*84.62*

Figure -1.2: Showing the Significance mean status of School level Science Educational achievements of same batch of students on basis of success and passed in HS Examination compare to the Secondary (Madhyamik) Examination for last 08 Batches as statistically described in the table 1.2.



- Series indicates research parameters

***Discussion -1:* Statistical Analysis and Figure** reveals the Significant similarity and mean relationship at each different parameter level of statistical results and also continuous increasing trend on achievement in Science Education. More it shows that the prime result-oriented success in the Examination conducted by the

Tripura Board of Secondary Education (TBSE) in Tripura depends to the group of Science Candidates.

4.5.2 Minor OBJECTIVE. 2

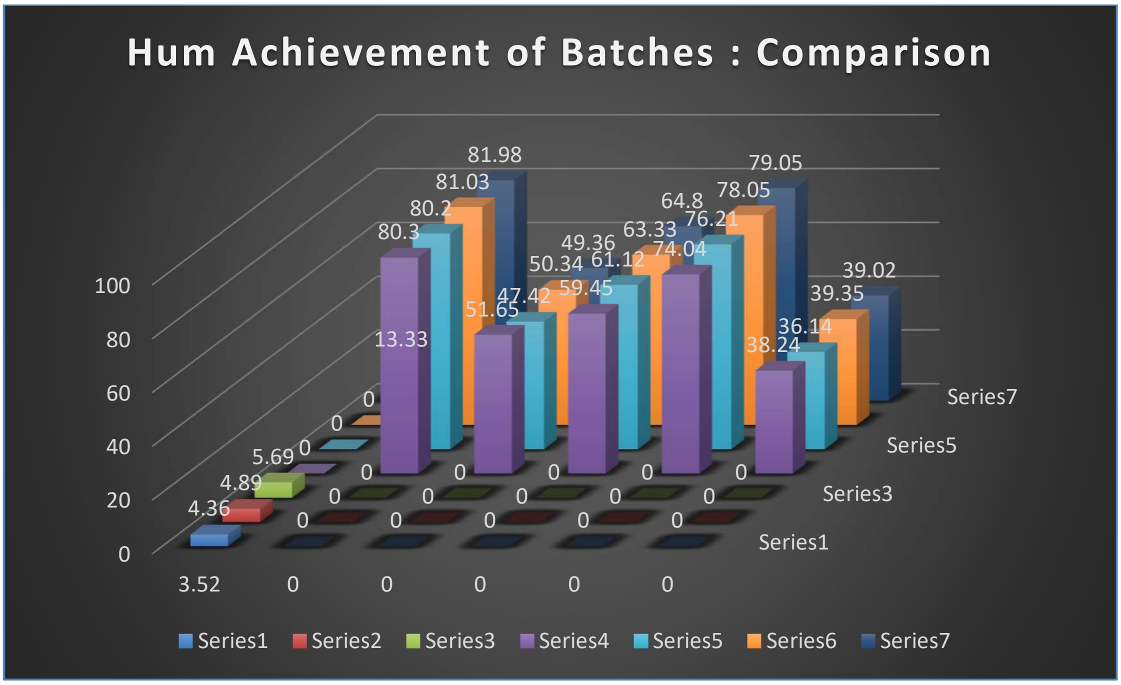
To study improvements of the candidate students of Tripura State in the higher secondary examination compare to their secondary examination conducted by the TBSE towards the achievement in Arts (Humanities) stream for last 08 batch.

Hypothesis -2: There will be a significant difference between the mean scores of candidate student of TBSE compare to Madhyamik and their Higher Secondary achievements. with respect of Humanities (Arts) stream acceptance.

Table -2.1: Showing the Significance mean status of School level Humanities (Arts) Educational achievements of same batch of students on different parameters in HS Examination compare to the Secondary (Madhyamik) Examination for last 08 Batches under Tripura Board of Secondary Education (TBSE) in Tripura.

BATCH	*Enrollment in Madhyamik*	*HS 1st div is % of Madhyamik enrolment.*	*HS Hum Enrollment is % of HS Total Enrolment.*	*HS Hum Enrollment is % of Madhyamik Enrolment.*	*HS Hum achievement is % of HS Total Enrolment.*	*HS Hum achievement is % of HS Hum Enrolment.*	*HS Hum achievement is % of Madhyamik Enrolment*	*HS 1st div is % of Madhyamik 1st div.*
01 2010/2012	**31609**	***03.52***	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***
02 2011/2013	**29800**	***04.36***	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***
03 2012/2014	**31696**	***04.89***	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***
04 2013/2015	**31854**	***05.69***	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***
05 2014/2016	**32867**	***NA***	***80.30***	***51.65***	***59.45***	***74.04***	***38.24***	***NA***
06 2015/2017	**35759**	***NA***	***80.20***	***47.42***	***61.12***	***76.21***	***36.14***	***NA***
07 2016/2018	**32863**	***NA***	***81.03***	***50.34***	***63.33***	***78.05***	***39.35***	***NA***
08 2017/2019	**37262**	***13.33***	***81.98***	***49.36***	***64.80***	***79.05***	***39.02***	***114.78***
Avr./Mean	***(263710/8) 32963.75***	***6.36***	***80.88***	***49.69***	***62.17***	***76.84***	***38.18***	***114.78***

Figure -2.1: Showing the Significance mean status of School level Humanities (Arts) Educational achievements of same batch of students on different parameters as statistically described in the table 2.1.

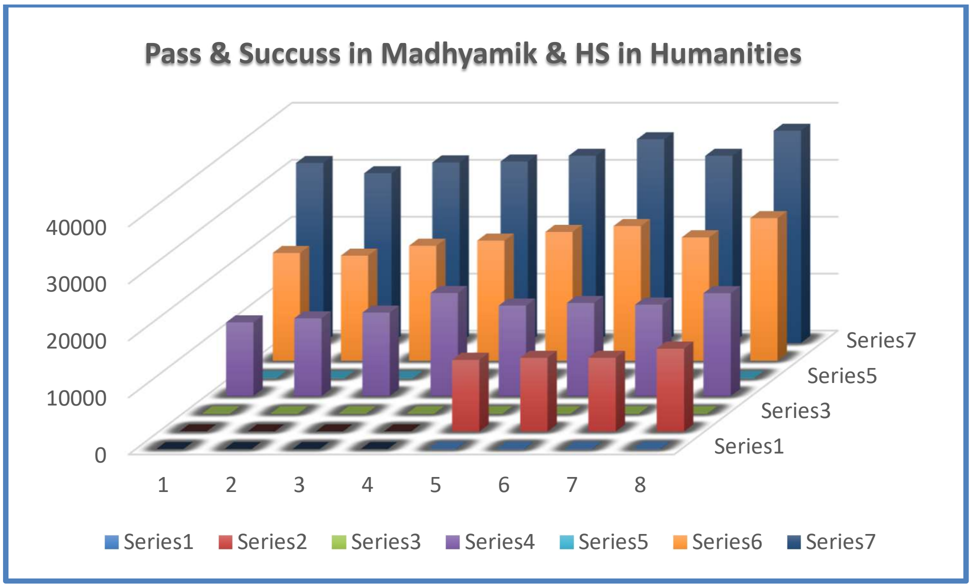


- Series indicates Batches.

Table -2.2: Showing the Significance mean status of School level Humanities (Arts) Educational achievements of same batch of students on basis of success and passed in HS Examination compare to the Secondary (Madhyamik) Examination for last 08 Batches under Tripura Board of Secondary Education (TBSE) in Tripura.

BATCH	*01 2010/ 2012*	*02 2011/ 2013*	*03 2012/ 2014*	*04 2013/ 2015*	*05 2014/ 2016*	*06 2015/ 2017*	*07 2016/ 2018*	*08 2017/ 2019*	*Avr./Mean*
Enrollment in Madhyamik (SAMPLE SIZE)	31609	29800	31696	31854	32867	35759	32863	37262	*(263710/8) 32963.75*
Madhyamik PASS	*18915*	*18441*	*20171*	*21078*	*22607*	*23641*	*21656*	*25011*	*21440*
% of Madhyamik achievement.	*60.05*	*62.07*	*63.83*	*66.39*	*68.78*	*66.41*	*66.14*	*67.38*	*65.13*
HS Total PASS	*12933*	*13642*	*14649*	*18079*	*15878*	*16345*	*16052*	*18064*	*15705.25*
% of HS achievement	*75.10*	*79.62*	*76.81*	*81.07*	*75.10*	*77.31*	*78.61*	*80.50*	*78.02*
HS Hum PASS	*NA*	*NA*	*NA*	*NA*	*12569*	*12924*	*12931*	*14540*	*13241*
% of HS Hum achievement	*NA*	*NA*	*NA*	*NA*	*74.04*	*76.21*	*78.17*	*79.05*	*76.87*

Figure -2.2: Showing the Significance mean status of School level Humanities (Arts) Educational achievements of same batch of students on basis of success and passed as statistically described in the table 2.2.



- Series indicates Batch wise parameters

***Discussion -2:* Statistical Analysis and Figure** reveals the Significant similarity and mean relationship at each different parameter level of statistical results and also continuous increasing trend on achievement in Humanities (Arts) Education. More it shows that the prime lion share of each batch are moving towards the Humanities (Arts) studies, but the success is one-third of each batch in the Examinations conducted by the Tripura Board of Secondary Education (TBSE) in Tripura.

4.5.3 Minor OBJECTIVE. 3

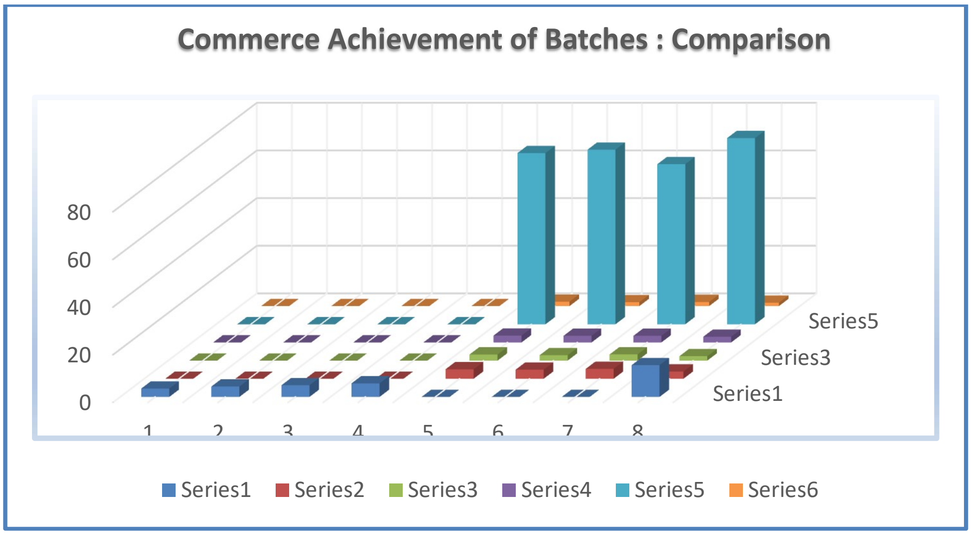
To study improvements of the candidate students of Tripura State in the higher secondary examination compare to their secondary examination conducted by the TBSE towards the achievement in commerce stream for last 08 batch.

Hypothesis -3: There will be a significant difference between the mean scores of candidate student of TBSE compare to Madhyamik and their Higher Secondary achievements. with respect of Commerce stream acceptance.

Table -3.1: Showing the Significance mean status of School level Commerce Educational achievements of same batch of students on different parameters in HS Examination compare to the Secondary (Madhyamik) Examination for last 08 Batches under Tripura Board of Secondary Education (TBSE) in Tripura.

BATCH	Enrollment in Madhyamik	HS 1st div is % of Madhyamik enrolment.	HS Com Enrollment is % of HS Total Enrolment.	HS Com Enrollment is % of Madhyamik Enrolment.	HS Com achievement is % of HS Total Enrolment.	HS Com achievement is % of HS Com Enrolment.	HS Com achievement is % of Madhyamik Enrolment	HS 1st div is % of Madhyamik 1st div.
01 ***2010/2012***	**31609**	***03.52***	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***
02 ***2011/2013***	**29800**	***04.36***	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***
03 ***2012/2014***	**31696**	***04.89***	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***
04 ***2013/2015***	**31854**	***05.69***	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***
05 ***2014/2016***	**32867**	*NA*	***3.99***	***2.57***	***2.87***	***71.83***	***1.85***	***NA***
06 ***2015/2017***	**35759**	*NA*	***3.82***	***2.26***	***2.79***	***73.27***	***1.65***	***NA***
07 ***2016/2018***	**32863**	*NA*	***4.14***	***2.58***	***2.78***	***67.18***	***1.73***	***NA***
08 ***2017/2019***	**37262**	***13.33***	***3.06***	***1.84***	***2.39***	***78.13***	***1.44***	***114.78***
Avr./Mean	***(263710/8)*** ***32963.75***	***6.36***	***3.75***	***2.31***	***2.71***	***72.60***	***1.66***	***114.78***

Figure -3.1: Showing the Significance mean status of School level Commerce Educational achievements of same batch of students on different parameters as statistically described in the table 3.1.

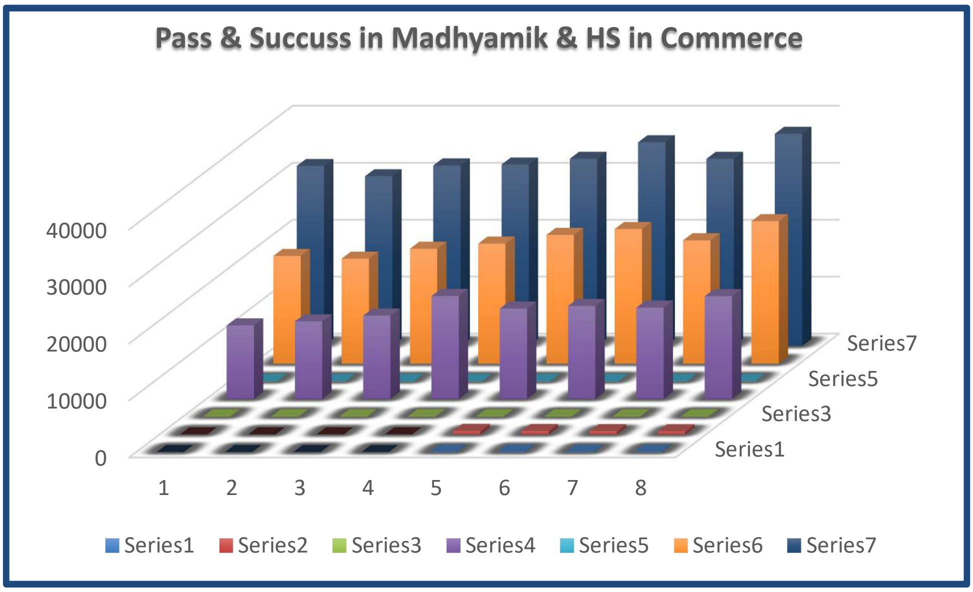


- *Series indicates research parameters*

Table -3.2: Showing the Significance mean status of School level Commerce Educational achievements of same batch of students on basis of success and passed in HS Examination compare to the Secondary (Madhyamik) Examination for last 08 Batches under Tripura Board of Secondary Education (TBSE) in Tripura.

BATCH	01 2010/ 2012	02 2011/ 2013	03 2012/ 2014	04 2013/ 2015	05 2014/ 2016	06 2015/ 2017	07 2016/ 2018	08 2017/ 2019	Avr./Mean
Enrollment in Madhyamik (SAMPLE SIZE)	31609	29800	31696	31854	32867	35759	32863	37262	(263710/8) 32963.75
Madhyamik PASS	18915	18441	20171	21078	22607	23641	21656	25011	21440
% of Madhyamik achievement.	60.05	62.07	63.83	66.39	68.78	66.41	66.14	67.38	65.13
HS Total PASS	12933	13642	14649	18079	15878	16345	16052	18064	15705.25
% of HS achievement	75.10	79.62	76.81	81.07	75.10	77.31	78.61	80.50	78.02
HS Com PASS	NA	NA	NA	NA	607	592	569	536	576
% of HS Com achievement	NA	NA	NA	NA	71.83	73.27	67.18	78.13	72.60

Figure -3.2: Showing the Significance mean status of School level Commerce Educational achievements of same batch of students on basis of success and passed as statistically described in the table 3.2.



- *Series indicates research parameters*

***Discussion -3:* Statistical Analysis and Figure** reveals the Significant similarity and mean relationship at each different parameter level of statistical results and also suggest that the share of candidates is too fewer to concern batch by only 01 percent in Commerce Education. More it shows that the prime lion shares of each batch, involved to the Commerce studies, are performing the successfully against each batch in the Examinations conducted by the Tripura Board of Secondary Education (TBSE) in Tripura.

4.5.4 Main OBJECTIVE. 4

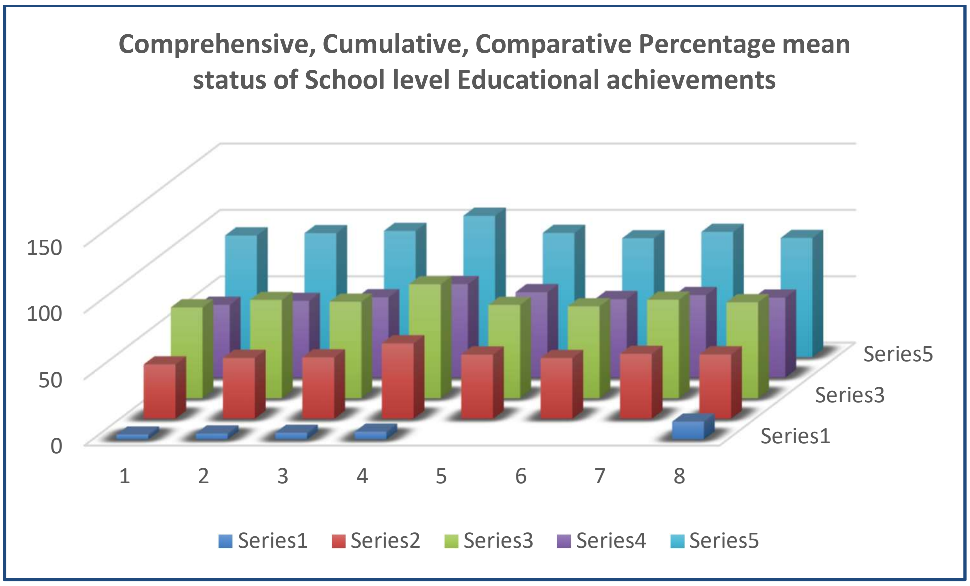
To study the batch wise appearance, enrolment, achievement and success of the candidate students of Tripura State towards Science, Arts (Humanities), and Commerce stream-based education in the higher secondary examination compare to their secondary examination conducted by the TBSE for last 08 batch.

Hypothesis - 4: There will be a significant difference between the mean scores of candidate student of TBSE compare to Madhyamik and their Higher Secondary achievements.

Table -4.1: Showing the Significance Comprehensive, Cumulative, Comparative Percentage mean status of School level Educational achievements of same batch of students on different parameters in HS Examination compare to the Secondary (Madhyamik) Examination for last 08 Batches under Tripura Board of Secondary Education (TBSE) in Tripura.

BATCH	*01* *2010/ 2012*	*02* *2011/ 2013*	*03* *2012/ 2014*	*04* *2013/ 2015*	*05* *2014/ 2016*	*06* *2015/ 2017*	*07* *2016/ 2018*	*08* *2017/ 2019*	*Avr./Mean*
Enrollment in Madhyamik	**31609**	**29800**	**31696**	**31854**	**32867**	**35759**	**32863**	**37262**	*(263710/8)* *32963.75*
HS enrollment is % of Madhyamik achievement.	*91.57*	*93.30*	*95.01*	*106.36*	*93.52*	*89.43*	*94.28*	*89.71*	*82.27*
HS enrollment is % of Madhyamik enrolment.	*54.79*	*57.74*	*60.46*	*70.38*	*64.32*	*59.12*	*62.13*	*60.22*	*61.14*
HS achievement is % of Madhyamik achievement.	*68.37*	*73.98*	*72.62*	*85.77*	*70.23*	*69.14*	*74.12*	*72.22*	*73.30*
HS achievement is % of Madhyamik enrolment.	*40.91*	*45.78*	*46.22*	*56.75*	*48.30*	*45.71*	*48.84*	*48.47*	*47.62*
HS 1st div is % of Madhyamik enrolment.	*03.52*	*04.36*	*04.89*	*05.69*	*NA*	*NA*	*NA*	*13.33*	*6.36*
HS 1st div is % of Madhyamik 1st div.								*114.78*	*114.78*

Figure -4.1: Showing the Significance Comprehensive, Cumulative, Comparative Percentage mean status of School level Educational achievements of same batch of students on different parameters as statistically described in the table 4.1.

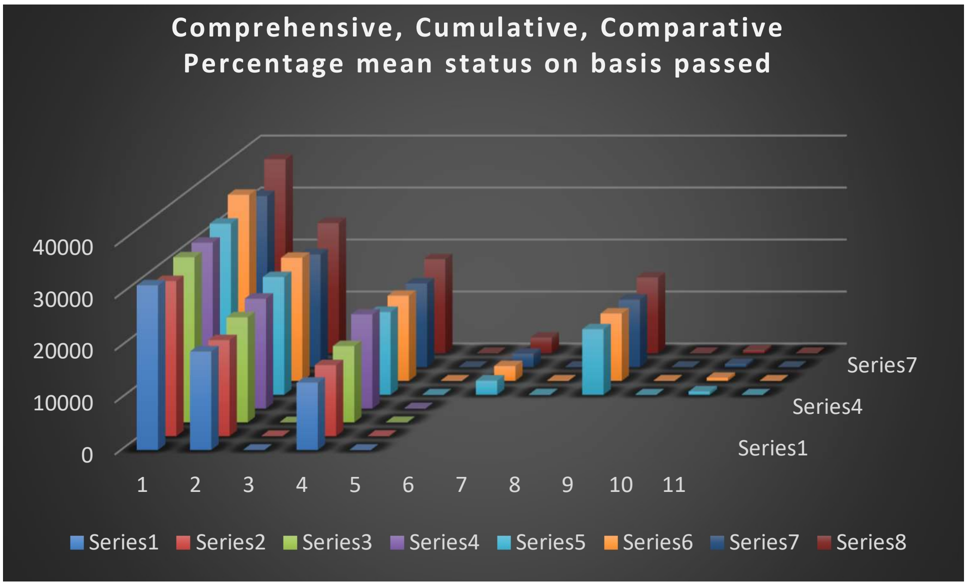


- *Series indicates research parameters except sample size and number indicates batches.*

Table -4.2: Showing the Significance Comprehensive, Cumulative, Comparative Percentage mean status of School level Educational achievements of same batch of students on basis of success and passed in HS Examination compare to the Secondary (Madhyamik) Examination for last 08 Batches under Tripura Board of Secondary Education (TBSE) in Tripura.

BATCH	***01*** ***2010/*** ***2012***	***02*** ***2011/*** ***2013***	***03*** ***2012/*** ***2014***	***04*** ***2013/*** ***2015***	***05*** ***2014/*** ***2016***	***06*** ***2015/*** ***2017***	***07*** ***2016/*** ***2018***	***08*** ***2017/*** ***2019***	***Avr./Mean***
Enrollment in Madhyamik (SAMPLE SIZE)	**31609**	**29800**	**31696**	**31854**	**32867**	**35759**	**32863**	**37262**	***(263710/8)*** ***32963.75***
Madhyamik PASS	***18915***	***18441***	***20171***	***21078***	***22607***	***23641***	***21656***	***25011***	***21440***
% of Madhyamik achievement.	***60.05***	***62.07***	***63.83***	***66.39***	***68.78***	***66.41***	***66.14***	***67.38***	***65.13***
HS Total PASS	***12933***	***13642***	***14649***	***18079***	***15878***	***16345***	***16052***	***18064***	***15705.25***
% of HS achievement	***75.10***	***79.62***	***76.81***	***81.07***	***75.10***	***77.31***	***78.61***	***80.50***	***78.02***
HS Sc PASS	***NA***	***NA***	***NA***	***NA***	***2702***	***2829***	***2552***	***2988***	***2767.75***
% of HS Sc achievement	***NA***	***NA***	***NA***	***NA***	***81.41***	***83.77***	***84.31***	***88.98***	***84.62***
HS Hum PASS	***NA***	***NA***	***NA***	***NA***	***12569***	***12924***	***12931***	***14540***	***13241***
% of HS Hum achievement	***NA***	***NA***	***NA***	***NA***	***74.04***	***76.21***	***78.17***	***79.05***	***76.87***
HS Com PASS	***NA***	***NA***	***NA***	***NA***	***607***	***592***	***569***	***536***	***576***
% of HS Com achievement	***NA***	***NA***	***NA***	***NA***	***71.83***	***73.27***	***67.18***	***78.13***	***72.60***

Figure -4.2 & 4.3: Showing the Significance Comprehensive, Cumulative, Comparative Percentage mean status of School level Educational achievements of same batch of students on basis of success and passed as statistically described in the table 4.2.



- *Series indicates batches and numbers indicates research parameters of the table.*

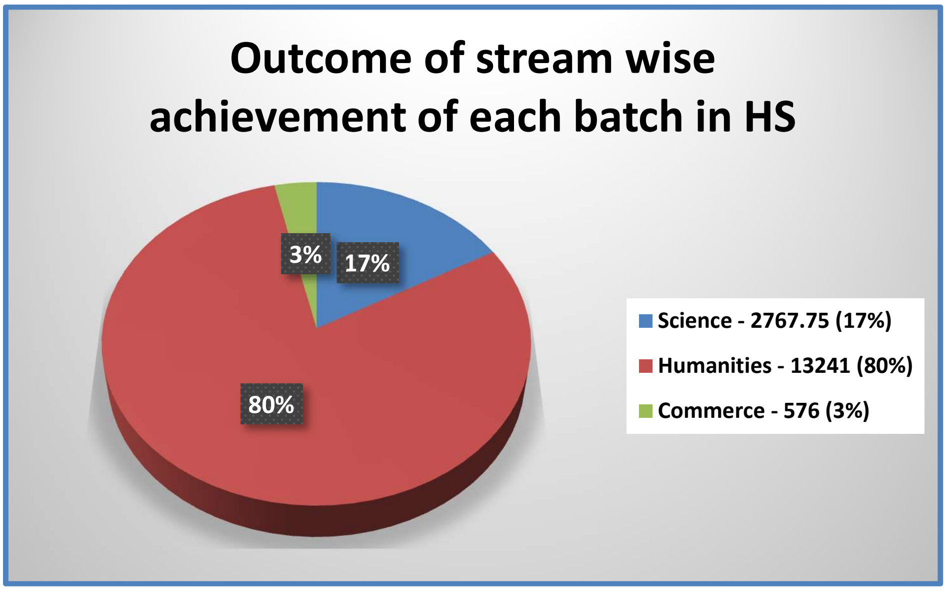


Table -4.3: Showing the Significance Comprehensive, Cumulative, Comparative Percentage mean status of School level Educational achievements of same batch of students and from different stream on different parameters in HS Examination compare to the Secondary (Madhyamik) Examination for last 08 Batches under Tripura Board of Secondary Education (TBSE) in Tripura.

Avr./Mean : Comprehensive Cumulative Comparative Study Findings of 8 batches.

BATCH (Madhyamik towards Higher Secondary Pass out)	*Enrollment in Madhyamik*	*HS 1st div is % of Madhyamik enrolment.*	*From Stream HS Enrollment is % of HS Total Enrolment.*	*From Stream HS Enrollment is % of Madhyamik Enrolment.*	*From Stream HS achievement is % of HS Total Enrolment.*	*From Stream HS achievement is % of HS Enrolment of Stream.*	*From Stream HS achievement is % of Madhyamik Enrolment*	*HS 1st div is % of Madhyamik 1st div.*
Science	***(263710/8)*** ***32963.75***	***6.36***	***15.36***	***9.43***	***12.99***	***84.61***	***07.97***	***114.78***
Humanity (Arts)			***80.88***	***49.69***	***62.17***	***76.84***	***38.18***	
Commerce			***3.75***	***2.31***	***2.71***	***72.60***	***1.66***	

Discussion -4: **Statistical Analysis and Figure** reveals the Significant similarity and mean relationship at each different parameter level of statistical results and also suggest that the share of candidates are almost 10 percent in each batch to the whole state population. More the achievement ratio is increasing after introducing the newer model of curriculum recommended by the NCERT as shows against each batch in the Examinations conducted by the Tripura Board of Secondary Education (TBSE) in Tripura. For most the figure shows the outcome of stream wise achievement of candidates of each batch in HS Examinations conducted for last 41 years by the Tripura Board of Secondary Education (TBSE) in Tripura.

Chapter V – RESULTS, SUMMARY, CONCLUSIONS AND EDUCATIONAL IMPLICATION

5.1 INTRODUCTION

Result, Conclusion, Educational Implication and suggestions are the basic discussion in this chapter of the present study, on the basis of analysis of the Secondary Data apart from brief restatement of the problem, objectives with hypotheses etc. The purpose of this section is to highlight major findings, which is the focused aim of this study and to suggest the further research options in the said same aspect. The conclusion also aims to summarize the result, importantly which will be enlightening the different perspectives of the ongoing school completion assessment mechanisms and its correlational outcome to the teaching – learning system in Tripura.

5.2 RESULTS AND MAJOR FINDINGS OF THE STUDY

5.2.1 Findings to Minor OBJECTIVE – 1 (on Science Education)

Researcher Found:

1. On completion of the school education after HS, only 7.97 percent by mean score of students achieves success with Science Education, which is increasing through its trend (2017/2019 – 8.01) with an extreme higher level of variation too. But the scenario is not reflecting the targeted plan and policies described, designed and focused in the NCF 2005 and NEP also. (Table 1.1)
2. In Science Education, students are succeeding by mean score only 7.97 percent from the batches i.e. from Madhyamik enrolment. But the enrolment of the students, engaging themselves to the school level Science education, with a dream & greater hope, are mean score of 9.43 percent of Madhyamik enrolment. Present Research also reveals that engaging to the Science education after Madhyamik on behalf of every batch i.e. each and

every Madhyamik enrolment gradually decreasing year by year and the fact also focused that the interest of studying Science in HS level is drastically reducing as the variation of enrolment mean is remarkable such as in 2014/2016 batch – 10.09, 2015/17 – 9.44, 2016/2018 – 9.21 and 2017/2019 – 9.01. More, the trend also arising question on the motive of Scientific Nation Building of NCF 2005, even after adaptation of newer Educational strategies following NCERT and CBSE for the Secondary and Higher Secondary Education by the Tripura Board of Secondary Education (TBSE) in Tripura. (Table 1.1)

3. Students enrolling themselves to Science Education in HS level are facing problems and other educational barriers to be succeed, as by mean score only 12.99 percent of enrolled students are successfully completing the School Education in Science Education and achieving success in school Science Education. The ratio of different batch is also depicting extreme variation in terms of both positive (13.38 & 13.31) and negative (12.78 & 12.49) scores that sharply confirms the uncertainty of making decision in selection of Stream after Madhyamik. (Table 1.1)
4. The Mean Score of Pass i.e. Achievement rate in Science education in HS level is 84.62 and the trend of achievement is gradually increasing with positive variations, batch by batch and year by year (i.e. 81.41> 83.77> 84.31> 88.98), hopefully due to adaptation of suggestive recommendations of CBSE and NCERT by the Tripura Board of Secondary Education (TBSE) in Tripura, whereas the pass or achievement ratio of HS overall remain static and closer most to its mean score of 78.02. The Pass ratio and achievement in Madhyamik of different batch also confirms same features with its mean score of 65.13. (Table 1.2)

5.2.2 Findings to Minor OBJECTIVE – 2 (on Humanities Education)

Researcher Found:

1. The Mean Score of 49.69 percent students of each batch after secondary stage accepting the stream Humanities Education and out of that mean score 38.18 has been achieving in HS level by studying Humanities

Education, where the mean score of both the parameters are comparatively equal standard to its to batchwise scores. (Table 2.1)

2. The score of Humanities Education achievement is the prime contributor to the total result achievement at HS examination and on this parameter such score is increasing continuously – gradually with the positive variation as exposed as 59.45> 61.12> 63.33> 64.80 compare to the Mean Score of 62.17. More similarly the batch wise achievement in Humanities Education in HS level compare to the enrollment is also increasing continuously – gradually with the positive variation as stated as 74.04> 76.21> 78.05> 79.05 and its Mean Score of 76.84. (Table 2.1)
3. The batchwise achievement in Humanities Education against each batch i.e. Madhyamik enrolment is almost static with Mean score of 38.18 and batchwise nearest scores. (Table 2.1)
4. The achievement i.e. Pass rate in HS level in Humanities Education is extreme nearest and similar to the total achievement i.e. total Pass rate in HS with respective mean score of 76.87 & 78.02. (Table 2.2)
5. The achievement i.e. Pass rate in HS level in Humanities Education is continuously – gradually increasing batch by batch & year by year as found score respectively 74.04> 76.21> 78.17> 79.05 and with a higher Mean score of 76.87. (Table 2.2)

5.2.3 Findings to Minor OBJECTIVE – 3 (on Commerce Education)

Researcher Found:

1. The achievement i.e. the pass rate in Commerce stream has been increasing with extreme variation (78.13) to the achievement mean score of 72.60 percent and 576 nos candidates due to newer syllabus. Other batch achievements are also comparatively relative to the mean score. (Table 3.2)
2. The achievement i.e. the pass rate (72.60) in Commerce stream is remarkably closer to the pass or achievement rate (78.02) of HS level. (Table 3.2)
3. The 1st Division achievement at HS level or at the school leaving or School education completion level of concern batch i.e. Madhyamik enrolment has

been raised by 2017/2019 batch scores 13.33, with an extreme variation to the concern mean score of 6.36 only. It happens hopefully due to newer strategies of educational management of the Tripura Board of Secondary Education (TBSE) in Tripura (Table 3.1)

4. The Enrolment in Commerce stream at the HS level is too fewer compare to the concern batch starts its journey from Madhyamik Enrolment by the mean score of 2.31. So, comparison of HS Commerce Enrolment (Mean Score 2.31) and HS Commerce Pass ratio (Mean Score 1.66) is specifically half in ratio. The statistics revealed students interested to the Commerce Stream is lesser and continuously decreasing, even silently too as Enrolment to the Stream Commerce compare to Madhyamik Enrolment i.e. concern batch has been squeezed drastically in 2017/2019 batch to 1.84 only and hence for achievement of this 2017/2019 batch marked praiseworthy raised success rate of 78.13 percent of pass rate. (Table 3.1)
5. The pass rate i.e. achievement rate of Commerce stream in HS level is 1.66 percent by mean score of Madhyamik Enrolment i.e. of concern batch. Variation in this regard to other batches are also not remarkable being to its close similarities. (Table 3.1)

5.2.4 Findings to Main OBJECTIVE – 4 (on Assessment Basics)

The Researcher Found:

1. Batches, undergoing to the sequence wise examinations of Madhyamik (Secondary) and thereafter the Higher Secondary towards completion of the school education and getting pass out from the basic school education, are consists of the mean score of 32963 candidates and gradually increasing year by year. (Table 4.2)
2. The Success rate (PASS) of each batch in Madhyamik Examination is 65.13 percent and 21440 candidates by mean score, though after 2014 onwards the success rate (PASS) is raised even over the mean score hopefully due to newer approach of Assessment and Academic curriculum based educational strategies following the educational managements and guidance of NCERT and as a part of introduction of parallel policies to the

CBSE. (Table 4.2)

3. The HS result and the candidate PASS from each batch revealed that its or school education completing students are only 50 percent of the total batch and by mean score the succeed candidate volume is 15705 only. More the rate of pass in HS level by mean score is 78.02 percent and year wise this rate remain same or utmost unchanged. (Table 4.2)
4. The Success rate (PASS) of each batch in HS Examination is similar and at same level. In Science, Humanities (Arts) and Commerce stream respectively the mean score is 84.62 (2767.75 nos), 76.87 (13241 nos) and 72.60 (576 nos) percent. The stream wise, in HS Examination, no remarkable success raises or increase has been recognized unlike Madhyamik Examination. (Table 4.2)
5. and 21440 candidates by mean, though after 2014 onwards the success rate (PASS) is raised even over the mean status hopefully due to newer approach of Assessment and Academic curriculum based educational strategies following the educational managements and guidance of NCERT and as a part of introduction of parallel policies to the CBSE. (Table 4.2)
6. By Mean score, HS achievement is 47.62 of Madhyamik enrolment to each batch. The score remain same to every batch except to 2013/2015 as hopefully due to introducing the newer educational strategies by the board, the score touches its extreme height in variation by 56.75. (Table 4.1)

5.3 CONCLUSIONS OF THE STUDY

In Science Education, the teaching learning methodologies, to process the nature of studying the subject science should focus enabling students to score better, but also emphasized on developing scientific attitude and scientific temperament, over the time, among them also.

Classroom learning scenario with ample scope of creativity, innovation problem solving catalyze the process of development of scientific attitude among students.

The Assessment processes should also be improvised considering the facts of real time cognitive development of the learners, 5E based learner-oriented learning process and in relationship to the recommendations of the National

Curriculum Framework (NCF) 2005 that student's life at school must be linked to their life outside the school.

At the Departmental level, due care must be taken to ensure quality teaching, provision of pre-requisites at infra structural level in schools etc.

The interpretation of the results prompted the research to draw the following important conclusions: -

1. **Enrolment to the Science Stream** after Madhyamik and the interest of studying Science in HS level is gradually decreasing year by year and batch by batch even drastically reducing too, due to uncertainty of making decision in selection of Stream after Madhyamik and also challenging the vision of Building of Scientific Nation in NCF 2005 even after adaptation of newer Educational strategies following NCERT and CBSE guidelines for the complete Education System including Secondary and Higher Secondary Education by the Tripura Board of Secondary Education (TBSE) in Tripura.
2. **To the Humanities Education,** the Enrolment and Achievements, both are the

   prime contributor to the total result achievement at HS Examination conducted by Tripura Board of Secondary Education (TBSE) and are increasing continuously – gradually through the year by year and batch by batch.
3. **In Commerce stream**, The Enrolment and intertest to the stream at the HS level is too lesser and continuously decreasing, throughout the years and batches and Moreover, the Achievement is specifically half in ratio to the enrolment, but praiseworthy considering its complete size too.
4. **The achievement** in terms of scoring 1st Division at HS level or at the school leaving or School education completion level of concern batches i.e. of Madhyamik enrolment has been raised by 2017/2019 batch and scores 13.33 percent, with an extreme variation to the concern mean score of 6.36 only hopefully due to adaptation and implementation of newer strategies of educational management by the Tripura Board of Secondary Education (TBSE) in Tripura
5. **On completion of School Education**, the education system (Primary -5+Upper Primary -3+Secondary -2+Higher Secondary -2) sharing the

society of each batch consists of 80% students from Humanity Education Back ground, only 17% from Science and only 3% from Commerce Background.

5.4 EDUCATIONAL IMPLICATION OF THE STUDY

5.4.1 The present study has implications for Students, Teachers, Curriculum Developers, Question Setters, Education Administrators, Policy Makers and Parents.

- **Implications for Learners/Students:**

  Academic Achievement in Secondary and Higher Secondary Level is applicable in almost all domains of interactions. All academic disciplines pave the ways to a learner to practice scientific method and scientific attitude, scientific temperament, towards which teacher and complete education system should have to be concern and responsible with students in facilitating them all required tool and techniques in classroom. Students should also participate in the learning process with heuristic attitude by adapting hands-on-approaches and understanding the assessment procedures using the Mock Test techniques.

- **Implications for Teachers:**

  Academic Achievement in Secondary and Higher Secondary Level of the students also demands the devotion of the Teachers, as a Guide, as a Leader, as a Facilitator, as a Manager, as a Evaluator and Examiner. Teacher should have to practice the process approach rather than traditional product approach as it motivates the students to respond what, why and how of a phenomenon. Classroom teaching practices with focus on attempts in developing education oriented scientific attitude among students prove instrumental enough in leading to desired learning and accordingly instead of intimating result of activities in advance teacher need to stimulate students to resolve problems at their own end.

- **Implications for Curriculum Developers:**

  Academic Achievement in Secondary and Higher Secondary Level is corelated with two basic factors such as TEXT BOOKS and Question papers. So to the students basics should be clarified in a crystal clear manner without any diversification and with enriched learning aspects to ensure the 100% success rate in the Board Examination to provide the society an enriched skillful generation for better future. Curriculum Developers may synthesize their planning adopting educational procedure based on the difficulty level to ensure success, but also have to confirms 0% unsuccess offering all concern facilities too.

- **Implications for Question Setters:**

  Academic Achievement in Secondary and Higher Secondary Level to be ensured also by the Question Setters too, who have to transmit their educational thoughts to the preparation of the sets organizing the educational and assessment principles.

- **Implications for Educational Administrators:**

  Administrators are the policy managers and implementing authority to ensure Academic Achievement in Secondary and Higher Secondary Level, who have to ensure the facilities to the whole system and to the system elements in an adequate volume for desire outcome. Approach of the Administrators should be positive suggestive and supportive instead of adapting dominance and egoistic one too.

- **Implications for Policy Makers:**

  Policy Makers have to understand the educational purpose along with its implicational methodology and the Educational outcome-based research finding for making, drafting, accepting and notifying educational policies to ensure Academic Achievement in Secondary and HS Level, based on which the complete system will go ahead to its desire aim and objectives.

- **Implications for Parents:**

  Being the unit of Education of both formal and informal and the first teacher to the learners, Parents have to encourage, motivate and guide the student towards desire Academic Achievement at every sphere of life.

5.4.2 EDUCATIONAL IMPLICATIONS – TEACHING LEARNING

To overcome the barriers of Secondary and Higher Secondary Education and to go ahead with the trend specified by the learners of the state through their achievement outcomes in Tripura, the society including all the authority agencies to the educational system and its implementing parts need to adopt the following remedial measures immediately too: -

Challenges & Barriers to the Science Education		**Suggested Remedial supports to overcome the barriers**
A)	Total Class curriculum Lode	Learners' curriculum practicing time management should be detailed along with the curriculum.
B)	Science Syllabus Lode	Science syllabus should be prepared keeping in mind about the general learners' cognitive development and to be categorized in groups according to the easy to hard especially exercises. So that the basics of science may be learnt by the learners.
C)	Lacunas of Learning & Science studying Time Management	Day to day planned Work book or unit wise workbook on science should be included to the curricular/text books.
D)	Lack of opportunity of guidance	Digital live supports & smart science Labs or science Tutorial Call centers may be established for the learners, so that learners may get resolved to their specific and nonspecific questions and problems of science education.
E)	Unguided version of Science Books	Science books should be written in guiding manners with a clear tutorial assistance on the missing links & hard spots in Science Education and even included with the digital audio-visual supports or some science kits. Preference should be given to the mother tongue of the learners.
F)	Unreachable area of on time Instruction of science Education	Any 24x7 Internet and web support, even live or recorded tele-communicational responding devices must be included to the science teaching learning process.
G)	Lack of guidance on	Daily study planner according the hierarchy

	Daily Based Practicing of Science and science-based mathematics	of formal education need to be introduced to promote daily basis science and science-based mathematics practicing culture to the learners.
H)	No Work Book	Manual and Digital both types of science Work books with focused form of sufficient science-based mathematics should be included as a mandatory option to the each and every curricular stage of formal education.
I)	Teaching Learning Materials or kits on Science and proper utilization of TLMs	Sensitive and Digital TLM & Puzzles on science and science-based mathematics needed to be utilized to correlate the subject to the learners as a lively and object-oriented subject to live the life in a suitable way.
J)	Lack of motivational discussion about Science and Scientists	History of Science and the motivational life sketch of the renowned Scientists should be enlightened to the learners of the Science Education to grow the interest to the subject and evolve the subject into loveable.
K)	Lack of knowledge sharing of the correlation of different Science methods	To overcome the problem of finding the correlation among the various Science and Science based mathematics, curriculum should be arranged in a suitable order based on the specific need and to make the subject easy to understand.
L)	Lack of Audio-Visual Assistance	Learner-friendly Live and Recorded Audio-Visual assistance to the learner should be introduced. It should be done for School and also for the students directly.
M)	Difficulties with Abstract knowledge	The guiding management for better Science oriented cognitive development at the stages of Informal to formal education to the learners along with even parents should be introduced.
N)	Development of Science Experiment Skill	Unit based practical life-oriented experiments should be introduced in textbooks for exclusive performance and practical knowledge.
		Etc.

5.5 SUGESTIONS FOR FURTHER STUDIES

The present study is the directive one to suggest the following areas for further studies towards future improvement of the academic and education system along with the management concern including redefining of assessment procedure: -

- Specified Studies are needed to evaluate the failure of the Education System that also influencing the both Teaching environment for the Teachers and Learning environment to the Learners.
- Subject wise curriculum and assessment evaluation and Specific investigation is the need of time and state too.
- Examination Management need to be re-evaluated according to the aim and objective of the Education and concern records should be covered under the research methodology through the ICT system too.

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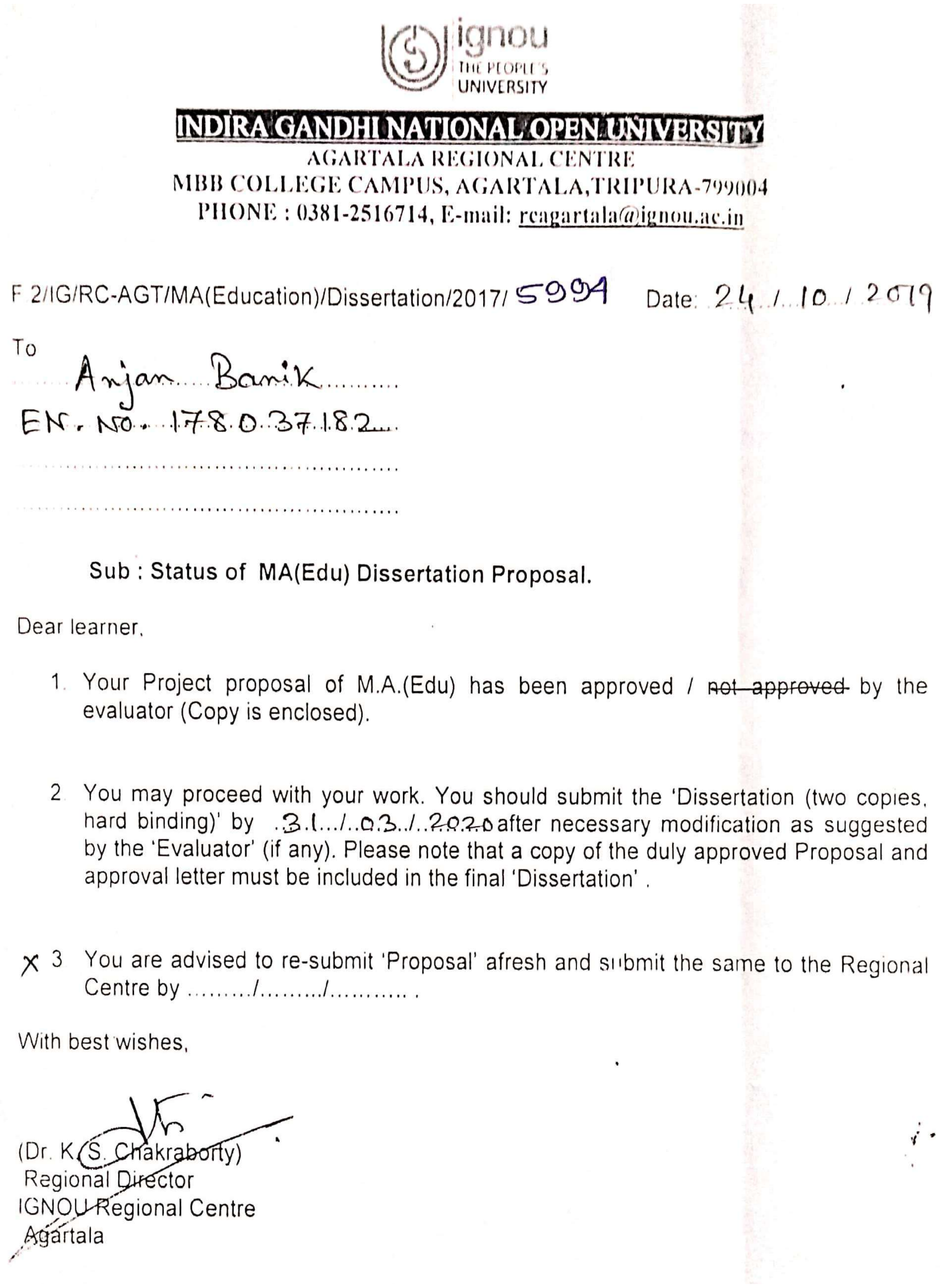
Appendices

- Approval of Dissertation Proposal
- Tools and techniques used
- Courses of study, if any
- Raw data (Lengthy and Complex not given in Chapter IV)
- Any new materials developed for research, e.g. PLM, SLM, CAI, etc.

APPROVED DISSERTATION PROPOSAL



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THE PEOPLE'S
UNIVERSITY

INDIRA GANDHI NATIONAL OPEN UNIVERSITY
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F 2/IG/RC-AGT/MA(Education)/Dissertation/2017/ 5994 Date: 24/10/2019

To
Anjan Banik
EN. NO. 178037182

Sub : Status of MA(Edu) Dissertation Proposal.

Dear learner,

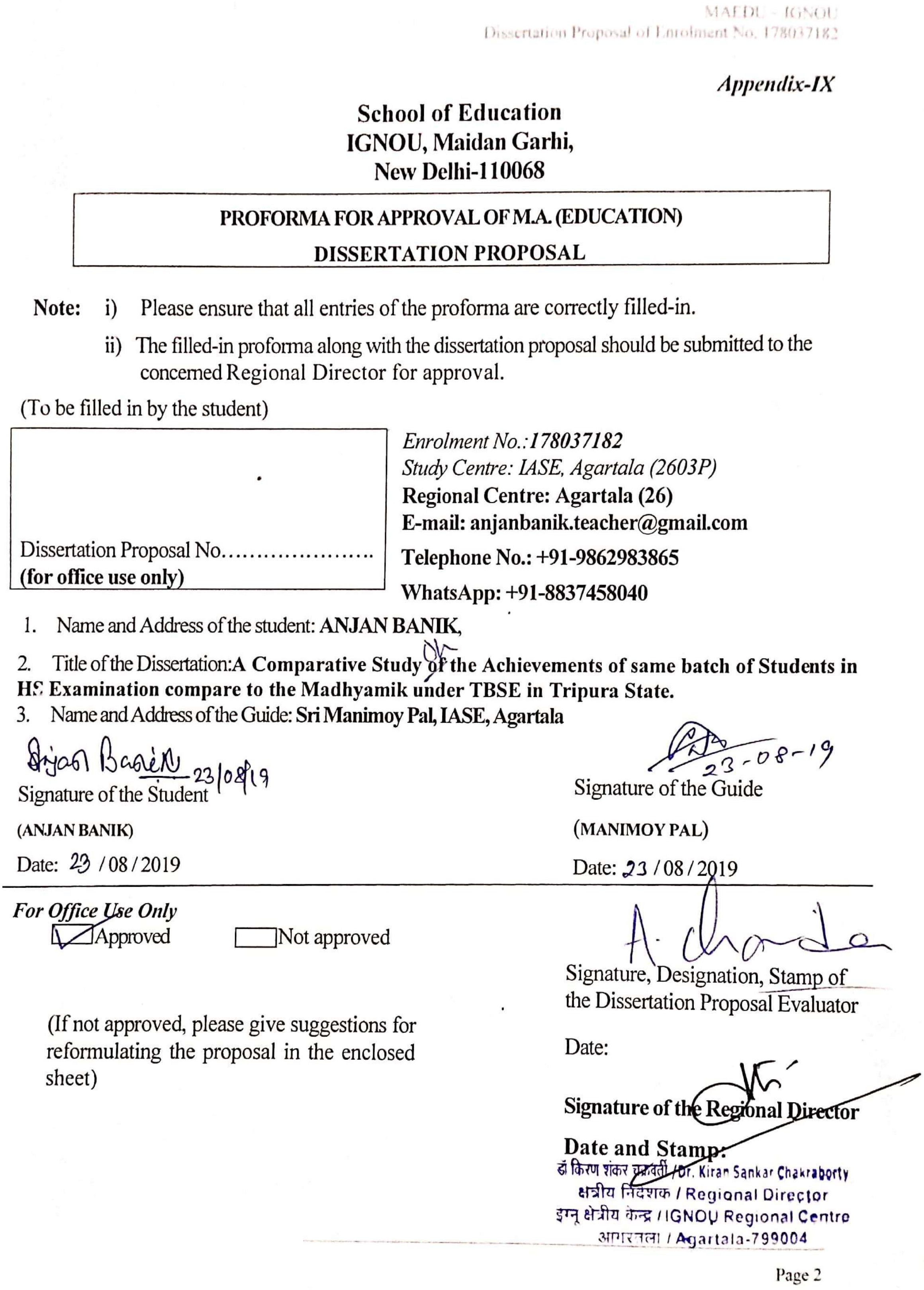
1. Your Project proposal of M.A.(Edu) has been approved / ~~not approved~~ by the evaluator (Copy is enclosed).

2. You may proceed with your work. You should submit the 'Dissertation (two copies, hard binding)' by 31/03/2020 after necessary modification as suggested by the 'Evaluator' (if any). Please note that a copy of the duly approved Proposal and approval letter must be included in the final 'Dissertation'.

x 3. You are advised to re-submit 'Proposal' afresh and submit the same to the Regional Centre by ………/………/……….. .

With best wishes,

(Dr. K.S. Chakraborty)
Regional Director
IGNOU Regional Centre
Agartala



Appendix-IX

School of Education
IGNOU, Maidan Garhi,
New Delhi-110068

PROFORMA FOR APPROVAL OF M.A. (EDUCATION) DISSERTATION PROPOSAL

Note: i) Please ensure that all entries of the proforma are correctly filled-in.

ii) The filled-in proforma along with the dissertation proposal should be submitted to the concerned Regional Director for approval.

(To be filled in by the student)

Dissertation Proposal No.......................
(for office use only)

Enrolment No.:178037182
Study Centre: IASE, Agartala (2603P)
Regional Centre: Agartala (26)
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1. Name and Address of the student: **ANJAN BANIK,**
2. Title of the Dissertation:**A Comparative Study of the Achievements of same batch of Students in HS Examination compare to the Madhyamik under TBSE in Tripura State.**
3. Name and Address of the Guide: **Sri Manimoy Pal, IASE, Agartala**

Anjan Banik 23/08/19
Signature of the Student
(ANJAN BANIK)
Date: 23 / 08 / 2019

23-08-19
Signature of the Guide
(MANIMOY PAL)
Date: 23 / 08 / 2019

For Office Use Only

☑ Approved ☐ Not approved

(If not approved, please give suggestions for reformulating the proposal in the enclosed sheet)

A. Chanda
Signature, Designation, Stamp of the Dissertation Proposal Evaluator
Date:

Signature of the Regional Director
Date and Stamp:
डॉ किरण शंकर चक्रवर्ती / Dr. Kiran Sankar Chakraborty
क्षेत्रीय निदेशक / Regional Director
इग्नू क्षेत्रीय केन्द्र / IGNOU Regional Centre
अगरतला / Agartala-799004

Appendix-V

TITLE OF THE STUDY

A Comparative Study on the Achievements of same batch of Students in HS Examination compare to the Madhyamik under TBSE in Tripura State.

A DISSERTATION PROPOSAL Submitted
To
IGNOU
Indira Gandhi National Open University
for the Degree of

MASTER OF ARTS (EDUCATION)

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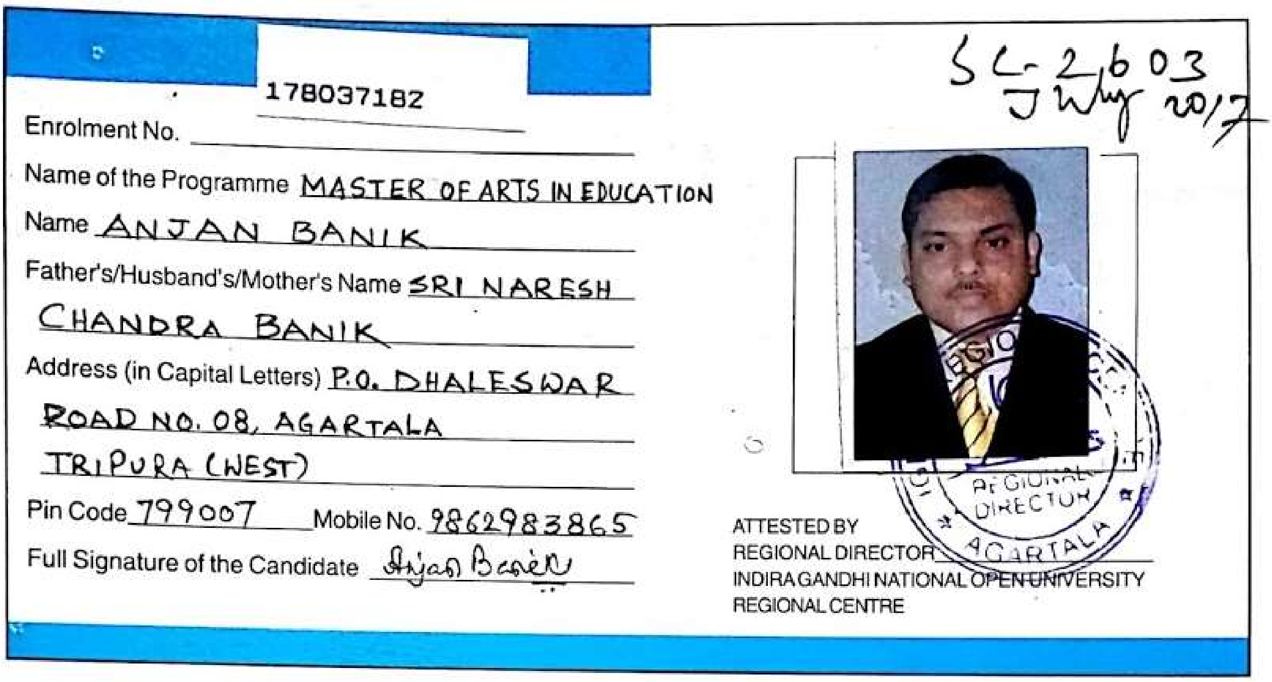

SC-2603
July 2017

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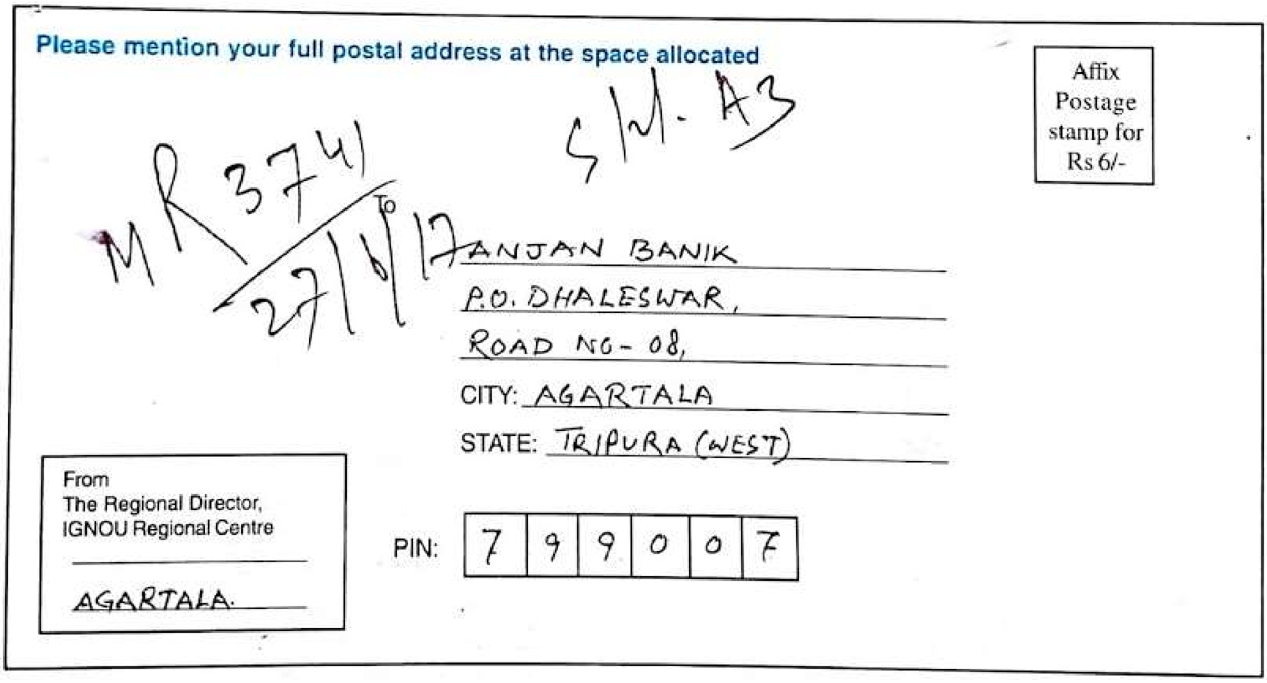

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Appendix-I

A Research Proposal

(Descriptive Survey Study)

TITLE: **A Comparative Study on the Achievements of same batch of Students in HS Examination compare to the Madhyamik under TBSE in Tripura State.**

INTRODUCTION

Education is the complex critical and broad spectrum multi-dimensional process of facilitating learning through various method of teaching towards development in understanding, gathering of knowledge, achieving the skill, and implementing the application of the knowledge, or the acquisition of knowledge, skills, values, beliefs, and habits. Education frequently takes place under the guidance of educators; however, learners may also educate themselves. Education can take place in formal or informal settings and any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational. Education is one of the most potential interactive known process for development of the society through even reducing inequality, discriminations, poverty among human beings. Education can change the whole world as plays a very vital role for the development of any society as well as for a nation also.

Albert Einstein describes, Education is not the learning of facts, but the training of the mind to think. So, examination may not reveal the actual learning trends of the students but may be indicate the direction of the educational system for the cause of the students' fate. The examination and its result may also depict the status of this important critical sector. The examination also identifies the processing errors of the system and its implementation apart from suggesting the outcomes towards the improvement of the whole educational system and he teaching-learning process too. So, Examinations are the tools to induce required changes in the formal educational systems.

Assessment in education is an essential part and the potent strategic tool for enhancing teaching and learning, where examinations play pivotal role. Assessment is the final stage and an integral part in teaching-learning process towards students learning against the three phases of process identified as Planning teaching-learning activities, Organising learning experiences, and assessment of student learning. In the process of assessment, evaluation has been done to categories the student's learning performance and to interpret, analyse, rank-order, and compare one's individual score with the average score of the batch. It finds one's relative position in a group. Towards the evaluation, assessment is the mean to understand the learning outcome. An assessment requires a reference that is used for comparison.

Gage and Berliner (1991) defined assessment as a part tool of *evaluation process of collecting, interpreting and synthesizing information in order to make decisions*. Assessment also refers to the measurement process of the accrued learning. Educationist use the term *achievement* to connote what a learner knows and what s/he can do after instructions. Assessment is made of those behaviours that a learner is expected to exhibit after undergoing instructions. Here, assessment is directly linked with learning as it reflects the learning outcome of the students. In the formal educational system, the Madhyamik after 10th class and there after the Higher Secondary (+2 Stage) are the respectively vital qualitative assessment of the students which ultimately revealed the learning outcome of the student batch and gives a definite feedback on the formal schooling too.

Madhyamik Examination is the ever-first evaluation or post instructional summative assessment for certification of a candidate student through the public examination after a decade long study & learning period of 10 years of formal education after both elementary & secondary level and also accountable to the 15 years of life experiences.

Higher Secondary Examination is the second evaluation of a candidate student through the public examination after the schooling phase of 12 years of formal education and even after the Madhyamik or after the 15 years of life experiences.

Batch wise Result Analysis may depict the realistic scenario of the education system and the learning outcome. Basically, education is considered as major indicator of development of any society or any individual. Academic achievement of the students is considered as one of the prime components to judge capacity and potentiality of someone. In modern era of all-round development, the academic achievement plays an important role in complete development of each and every individual to be citizens and also to the nation. At present, the quantitative and qualitative education system has depended on pupil's academic achievements. The academic achievement is one of the top priorities for the individuals and for the school too, apart from the society. It is the out come of education, that extent to which a student, teacher or institution has achieved their educational goals. Academic achievement is commonly measured by the examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important. It is fact that a nation's progress depends upon its' student's academic achievements and development. That's the reason each and every society emphasizes on its student's academic achievements. The academic achievements of the students lead the development of the society to go forward ahead. The recent move of the world become more and more competitive to its citizen. Hence, Quality of performance has become the key factor for the individual progress.

STATEMENT OF THE STUDY

The quality of any country depends upon the quality of its citizen. The quality of citizen depends upon the quality of education. The educational quality has been identified through the analysis of the secondary and higher secondary level examinations conducted by the secondary education boards. The achievement of a student in Madhyamik and thereafter in the Higher Secondary shows the learning outcome of the student or even of the candidate-batch. The present study has great need and significance because this study shows about the actual achievements of 08 batch students in Higher Secondary (+2 stage) after the Secondary i.e. Madhyamik. These two mile-stone public examinations' assessment-based analysis of 08 batch will give a cumulative comprehensive concrete conclusion on the school-based learning in formal educational system.

REVIEW OF THE RELATED STUDIES

Primary Studies:

1977	**Krishnan**	conducted a Study on non-intellectual factors and their influences on academic achievements. The sample comprised of 180 students of sixth to ninth class studying in central school Tirupati and was divided into three groups depending on their parent's education as high, middle & low. The results indicated that parent's educational status had significant influence on the academic achievement of their children.
1983	**Aggarwal**	conducted a Study on reading ability in relation to some cognitive and non-cognitive factors. The sample constituted 200 boy & girl students selected randomly from the high schools of Bihar in India. Data were collected by administering reading ability test to the sample. The results of the study indicated that girl students had better reading ability and higher academic achievement than the boys.
1983	**Singh & Srivastava**	investigated the impact of parent's literacy on the academic achievement on sample of 85 first grade and 80 fifth grade students of Punjab in India. Student's scores on an achievement test were taken as measures of academic achievement of the students. The findings indicated that Parent's literacy had a positive relationship with younger students' academic achievement.
1984	**Sharma**	conducted a Study on academic achievement of school students vis-à-vis their parent's education. The sample comprised of 230 ninth class students of Punjab in India from whom the data for the educational level of their parents were collected and analysed. The findings revealed that the parent's

		education was positively and significantly associated with academic achievements of their children.
1986	**Baker & David**	recognized mother's strategies for children's school achievement. The investigator collected data from heterogeneous sample of mothers of eight grades through interview schedule. The result also indicated that parents actively manage their children's school career in a way that could have direct consequences for their children's academic achievement. Mother's education levels were found to influence academic achievement of the students through parental involvement and parental encouragement.
2006	**Halawah**	examined the effect of motivation from family environment and student characteristics on academic achievement on the sample comprised of 388 high school students including 193 girl students of Abu Dhabi district in United Arab Emirates. Grade point average was taken as measure of academic achievement of the students. The results revealed no significant gender difference in academic achievement of the students.
2006	**Preiss & Franova**	analysed the relationship between depressive symptoms, academic achievement and intelligence. The data were collected from the sample of 635 school students consisting 304 boys and 331 girls by using Wechsler's intelligence scale for children and grade point average. The findings indicated that there was no gender difference in academic achievement of boys and girls.

Focused Studies:

2013 Chandra conducted a Study on Achievement in Science through Rastriya Madhyamik Shiksha Abhiyan (RMSA) among the students of Standard IX, which is a survey research and carry out 195 students have been selected by random sampling from the schools. The major findings of the study were –

- ***iii.*** The girl students are having significantly higher level of achievements in science through RMSA than the boys.
- ***iv.*** Urban Students are having significantly higher level of achievements in science through RMSA than Rural Students.

2019 Shil conducted a Study on the achievement of students in Madhyamik Examination in the subject science in Unokoti District, Tripura, where the study has been conducted with the sample size of 200 Madhyamik Candidates out of which 100 are Boys Students and 100 are girls Students. The finding of the study revealed that the girl candidates in Madhyamik have better achievement in science than the Boy students and the rural candidates are at per with the urban candidates in Madhyamik in terms of achievement.

RESEARCH QUESTIONS

1) What are the significant improvements of the students of Tripura State in comparison to the secondary level & higher secondary level towards the achievement in science in view of the board examinations conducted by the TBSE for last 41 years?

2) What are the significant trends of students of Tripura State towards the science education in view of the board examinations conducted by the TBSE for last 41 years?

3) What are the significant trends of students of Tripura State towards the commerce & humanity education in view of the board examinations conducted by the TBSE for last 41 years?

OBJECTIVES OF THE STUDY

The following objectives are formulated for the proposed study:

Main Objective

2) To study the batch wise appearance, enrolment, achievement and success of the candidate students of Tripura State towards Science, Arts (Humanities), and Commerce stream-based education in the higher secondary examination compare to their secondary examination conducted by the TBSE for last 08 batch.

Minor Objectives

4) To study improvements of the candidate students of Tripura State in the higher secondary examination compare to their secondary examination conducted by the TBSE towards the achievement in science stream for last 08 batch

5) To study improvements of the candidate students of Tripura State in the higher secondary examination compare to their secondary examination conducted by the TBSE towards the achievement in Arts (Humanities) stream for last 08 batch

6) To study improvements of the candidate students of Tripura State in the higher secondary examination compare to their secondary examination conducted by the TBSE towards the achievement in commerce stream for last 08 batch

OPERATIONAL DEFINITION OF THE TERMS

❖ ***Achievement***:

Achievement denotes marks and grades in examinations which acquired by candidates from his or her Madhyamik & Higher Secondary Examination under the Tripura Board of Secondary Education (TBSE).

- ***Candidates:***

  The candidates denote the boys and girls i.e. enrolled students, who appearing Madhyamik and there after the Higher Secondary Examination under Tripura Board of Secondary Education (TBSE).

- ***Madhyamik:***

  An ever first Certificate course based public Examination controlled by an autonomous body performed by the candidate students, who are completed already 10th class of formal education known as Metric or Madhyamik. The Certificate is here provided by the board known as Tripura Board of Secondary Education (TBSE).

- ***Higher Secondary Examination:***

  The next level public examination under board after Madhyamik examination, which is the end level of schooling Certificate course Examination or pre-college course examination and controlled by an autonomous body performed by the candidate students, who are completed already +2 stage study in +2 years of formal education after 10th class and Madhyamik Examination. The Certificate is here provided by the board known as Tripura Board of Secondary Education (TBSE).

- ***State:***

  The State refers to the state of TRIPURA, The tiny state of North-East India and one prime partner state among the seven sisters – one brother or Ashta-Laxmi land. The state is surrounded by International Border with Bangladesh in three sides apart from one side where the state is attached like appendix with the rest Indian land. It's the state which has been constituted the Tripura Board of Secondary Education (TBSE) to conduct its own examination processes like Madhyamik and there after the Higher Secondary Examination.

- ***Batch:***

  The Batch denotes the same group of candidate-students i.e. the boys and girls, who are appearing Madhyamik after their 10th Class and there after the two years of study of +2 stage again appearing the Higher Secondary Examination under Tripura Board of Secondary Education (TBSE). The batch has been indicated as 2010/2012 means a group appearing Madhyamik on 2010 and thereafter Higher secondary on 2012 i.e. after a scheduled interval of study.

- ***TBSE:***

  The Tripura Board of Secondary Education (TBSE) is the responsible autonomous organization to conduct Secondary & higher Secondary level public examination process in Tripura State for State Govt based schools and was established in 1973 by an Act (Tripura Act. No.12) called Tripura Board of Secondary Education Act, 1973 as passed by Tripura Legislative Assembly. The Board started its functioning from the 1st January, 1976. Intervening period was spent in framing Rules and Regulations, Curricula and Syllabi, and such other guidelines which were being necessary for smooth and active conduct of the business of the Board. It was in 1976 that the Tripura Board of Secondary Education conducted its first Public Examinations - School Final Examination [old system], Madhyamik Pariksha (Secondary Examination) [new system], and Higher Secondary Examination [old system]. Subsequently, Higher Secondary (+2 stage) Examination [new system] was introduced in 1978. Before 1976, all the High and Higher Secondary Schools of Tripura were affiliated under the West Bengal Board of Secondary Education and the students of Tripura had to appear at the School Final and Higher Secondary Examinations conducted by the West Bengal Board of Secondary Education. With the abolition of old courses, the Tripura Board of Secondary Education now conducts 2(two) major Public Examinations --- Madhyamik Pariksha (Secondary Examination) and Higher Secondary (+2 stage) [both General and Vocational courses] Examination since 1981. With the passage of time the core curricula were also changed from time to time and ultimately adopted the syllabi as per NCF, 2000 guidelines from 2006. The Syllabi and Question Pattern as per guidelines of NCF, 2005 are under active consideration of the Board. The Tripura Board of Secondary Education is one of the few Boards in the country which has introduced Centralized Evaluation system from its very inception. Headed by the President of the Board, Tripura Board of Secondary Education is governed by a Governing Body. The Act provides for constitution of several Committees, and each Committee headed by the President, and the Secretary acting as its Convener.

HYPOTHESES OF THE STUDY

The following hypotheses are formulated to empirically validate the above objectives

1) There will be a significant difference between the mean scores of candidate student of TBSE compare to Madhyamik and their Higher Secondary achievements.

2) There will be a significant difference between the mean scores of candidate student of TBSE compare to Madhyamik and their Higher Secondary achievements with respect of science stream acceptance.

3) There will be a significant difference between the mean scores of candidate student of TBSE compare to Madhyamik and their Higher Secondary achievements. with respect of Humanities (Arts) stream acceptance.

4) There will be a significant difference between the mean scores of candidate student of TBSE compare to Madhyamik and their Higher Secondary achievements. with respect of Commerce stream acceptance.

DELIMITATION OF THE STUDY

1) The study will be delimited to the batch wise (10/+2) students enrolled as candidates, who appeared in Madhyamik at secondary level and then Higher Secondary (+2 Stage) Board examination after consecutive next second year (+2 Years) during academic session of 08 batch from 2010/2012 to 2017/2019 under the Tripura Board of Secondary Education (TBSE).

2) The study will also be delimited to the collection of the Batch wise (10/+2) Result Abstracts of the Board Examination results conducted by the Tripura Board of Secondary Education (TBSE).

METHODOLOGY OF THE STUDY

The methodology of the study comprises research method, population, sample, tool, procedure of data collection, and procedure of data analysis as discussed below.

Research Method

Descriptive survey method will be adopted for the present study.

Population

The population of the study is all the batch wise (10/+2) students enrolled as candidates, who appeared in Madhyamik at secondary level and then Higher Secondary (+2 Stage) Board examination after consecutive next second year (+2 Years) from the whole State of Tripura and under the Tripura Board of Secondary Education (TBSE) for last (1978-2019) 41 years or last four decades.

All concern batch of students during academic session Madhyamik 1978 & HS 1980 to Madhyamik 2017 & HS 2019 will constitute the population of the study.

During the aforesaid academic session begins with the first examination conducted by the TBSE on 1978 to touch point of 2020, there are 41 Batch, who had been under gone to the Public Examination process conducted by the Tripura Board of Secondary Education (TBSE).

Accordingly, In the study, Average 31500 enrolled students of each 30 batch had been under gone to the board examinations under the Tripura Board of Secondary Education (TBSE).

Hence, the population for the study may be regarded of average 31500 students for previous 41 years, which results 31500x41=12,91,500 i.e. **12.91 lacs student's population**.

Sampling

Simple random sampling will be used for this study.

Sample

Systematic sampling method will be followed to draw the sample from the target population.

It is proposed to draw only **08 Batch**, who had been under gone to the Board Examination.

The concern 08 batch from 2010/2012 to 2017/2019 each under the Tripura Board of Secondary Education (TBSE) has been considered through systematic sampling method.

Hence, the average sample for the study will be regarded of average 31500 students for previous 08 years, which results 31500x8=2,52,000 i.e. **2.5 lacs student's sample**.

TOOL

The Batch wise (10/+2) Result Abstracts of the Board Examination of same batch i.e. Madhyamik (10+) and Higher Secondary (+2) Examination results conducted by the Tripura Board of Secondary Education (TBSE) will be considered and collected with an acknowledgement from the authority of the Tripura Board of Secondary Education (TBSE) for the study.

PROCEDURE OF DATA COLLECTION

Data pertaining to the Batch wise (10/+2) Result Abstract of the Board Examination conducted by the Tripura Board of Secondary Education (TBSE) will be collected with an acknowledgement from the authority of the Tripura Board of Secondary Education (TBSE) for the study.

PROCEDURE OF DATA ANALYSIS

The data to be obtained from the sample will be analyzed with the help of both quantitative and qualitative techniques.

EDUCATIONAL IMPLICATIONS OF THE STUDY

The study will have significant implications for improving the course curriculum, assessment and evaluation processes, and also the class room based learner-oriented teaching-learning activities organized under the Tripura Board of Secondary Education (TBSE) and throughout the Tripura state. The study will depict the current status and deficits of the said process of last four decades and indicates the direction for development which will enhance the student learning.

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TOOLS & TECHNIQUES USED

COURSES OF STUDY

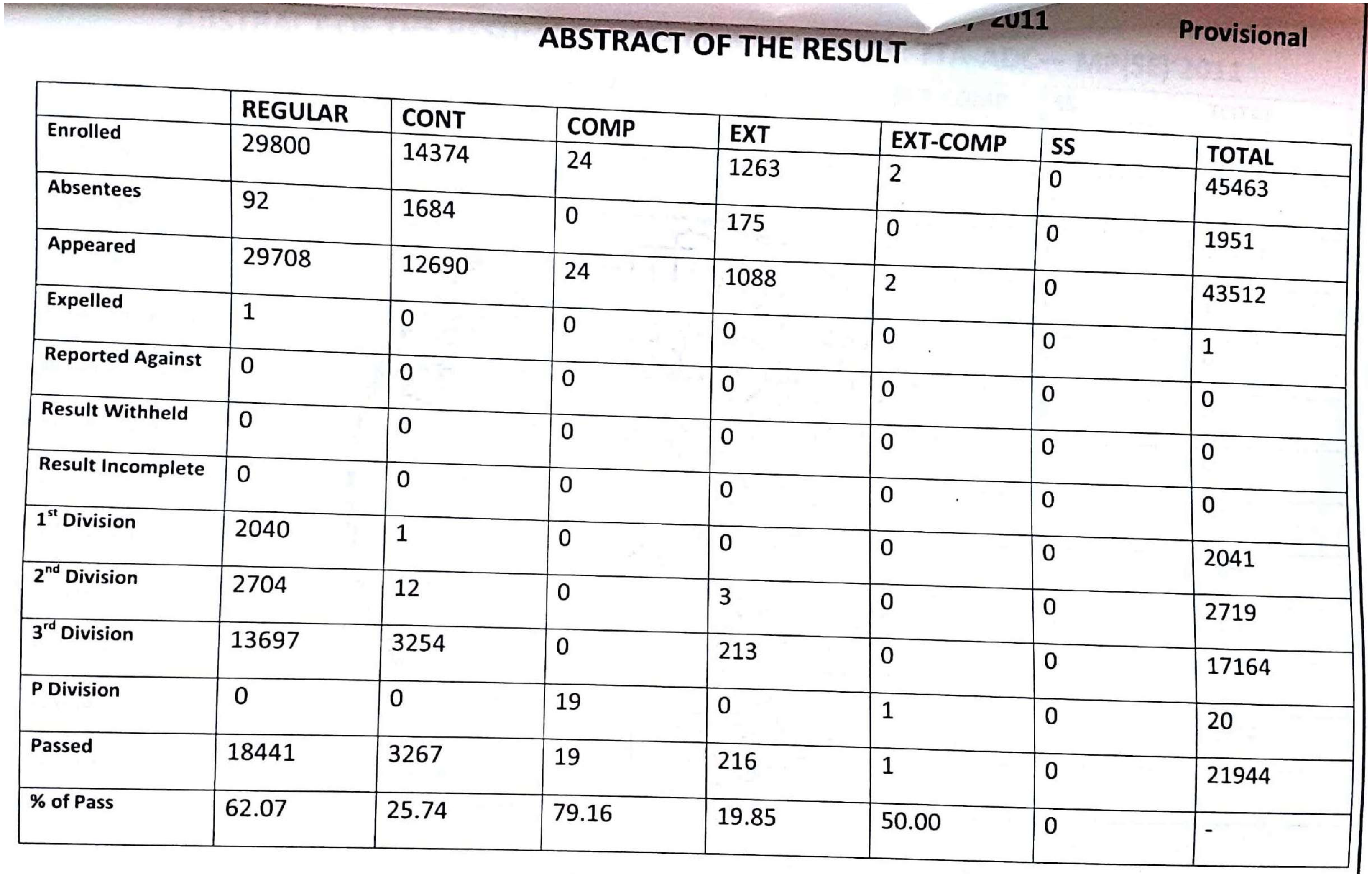
RAW DATA

ABSTRACT OF TBSE RESULT SHEETS
OF
MADHYAMIK 2010-2019

ABSTRACT OF THE RESULT

	REGULAR	CONT	COMP	EXT	EXT-COMP	SS	TOTAL
Enrolled	31609	12378	111	1377	4	5	45484
Abseentees	109	1220	0	234	0	0	1563
Appeared	31500	11158	111	1143	4	5	43921
Expelled	2	9	0	3	0	0	14
Reported Against	4	0	0	1	0	0	5
Result Withheld	0	1	0	0	1	0	2
Result Incomplete	0	0	0	0	0	0	0
1st Division	1722	2	0	2	0	0	1726
2nd Division	2564	18	0	11	0	0	2593
3rd Division	14629	4001	0	209	0	0	18839
P Division	0	0	73	0	0	4	77
Passed	18915	4021	73	222	0	4	23235
% of Pass	60.05	36.04	65.77	19.42	0	80.00	

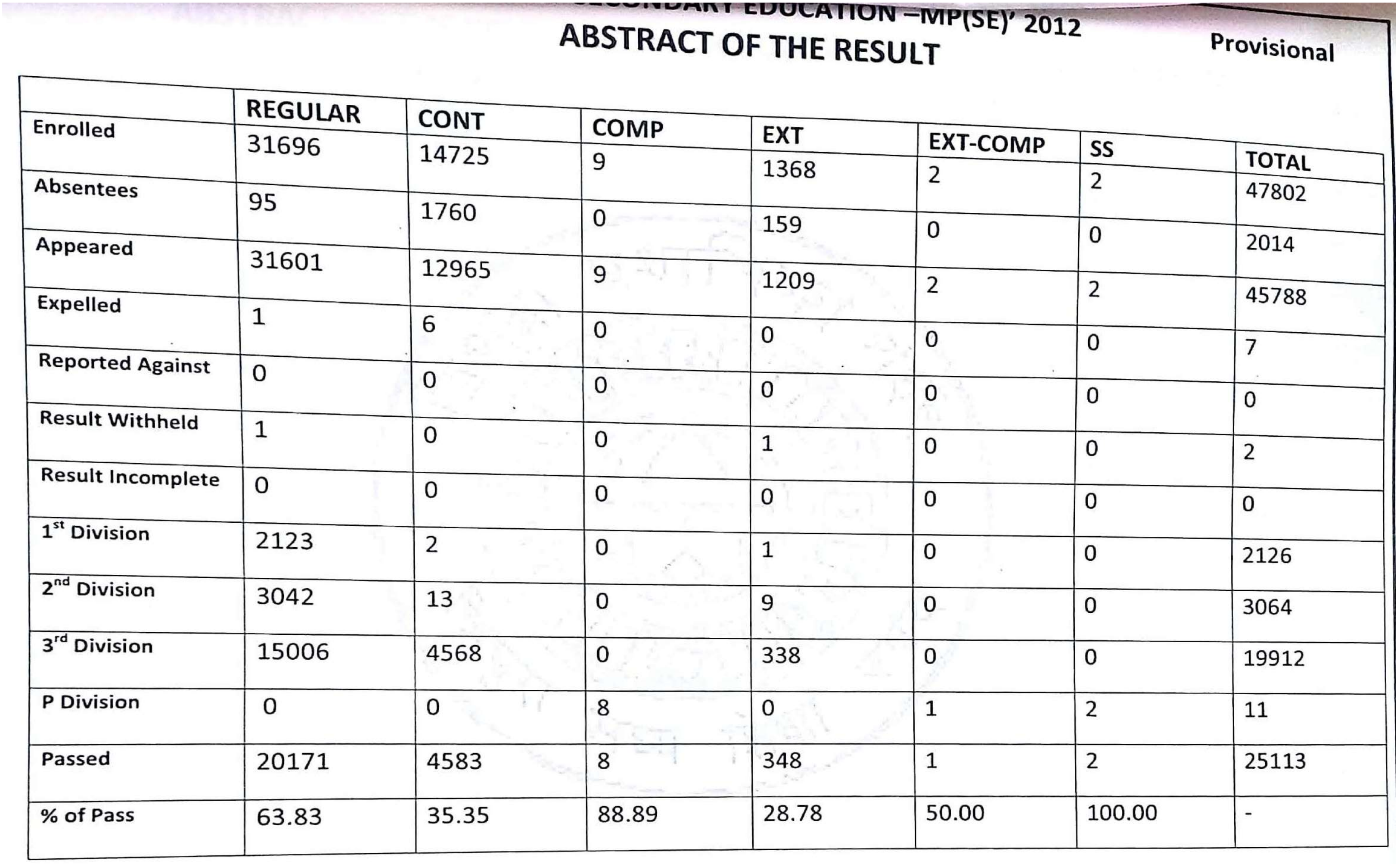
Madhyamik - 2010



ABSTRACT OF THE RESULT / 2011 **Provisional**

	REGULAR	CONT	COMP	EXT	EXT-COMP	SS	TOTAL
Enrolled	29800	14374	24	1263	2	0	45463
Absentees	92	1684	0	175	0	0	1951
Appeared	29708	12690	24	1088	2	0	43512
Expelled	1	0	0	0	0	0	1
Reported Against	0	0	0	0	0	0	0
Result Withheld	0	0	0	0	0	0	0
Result Incomplete	0	0	0	0	0	0	0
1st Division	2040	1	0	0	0	0	2041
2nd Division	2704	12	0	3	0	0	2719
3rd Division	13697	3254	0	213	0	0	17164
P Division	0	0	19	0	1	0	20
Passed	18441	3267	19	216	1	0	21944
% of Pass	62.07	25.74	79.16	19.85	50.00	0	-

Madhyamik - 2011



NDARY EDUCATION –MP(SE)' 2012

ABSTRACT OF THE RESULT

Provisional

	REGULAR	CONT	COMP	EXT	EXT-COMP	SS	TOTAL
Enrolled	31696	14725	9	1368	2	2	47802
Absentees	95	1760	0	159	0	0	2014
Appeared	31601	12965	9	1209	2	2	45788
Expelled	1	6	0	0	0	0	7
Reported Against	0	0	0	0	0	0	0
Result Withheld	1	0	0	1	0	0	2
Result Incomplete	0	0	0	0	0	0	0
1st Division	2123	2	0	1	0	0	2126
2nd Division	3042	13	0	9	0	0	3064
3rd Division	15006	4568	0	338	0	0	19912
P Division	0	0	8	0	1	2	11
Passed	20171	4583	8	348	1	2	25113
% of Pass	63.83	35.35	88.89	28.78	50.00	100.00	-

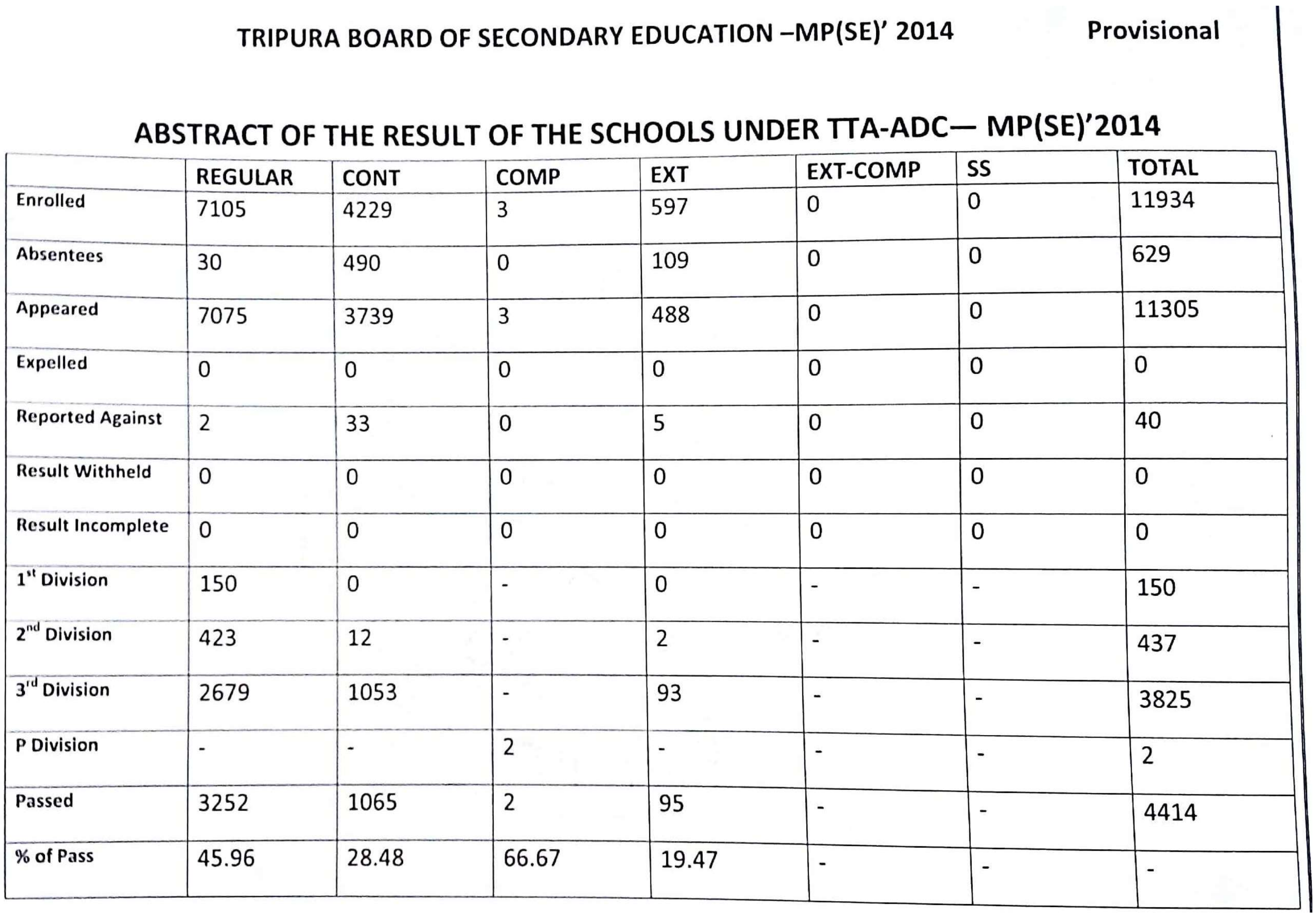
Madhyamik - 2012

Provisional

ABSTRACT OF THE RESULT

	REGULAR	CONT	COMP	EXT	EXT-COMP	SS	TOTAL
Enrolled	31854	14031	43	2001	1	3	47933
Absentees	103	1717	1	263	0	1	2085
Appeared	31751	12314	42	1738	1	2	45848
Expelled	3	10	0	13	0	0	26
Reported Against	1	1	0	0	0	0	2
Result Withheld	0	0	0	0	0	0	0
Result Incomplete	0	0	0	0	0	0	0
1st Division	2319	1	-	1	-	-	2321
2nd Division	3639	38	-	25	-	-	3702
3rd Division	15120	4520	-	530	-	-	20170
P Division	-	-	38	-	1	2	41
Passed	21078	4559	38	556	1	2	26234
% of Pass	66.39	37.02	90.48	31.99	100.00	100.00	-

Madhyamik - 2013

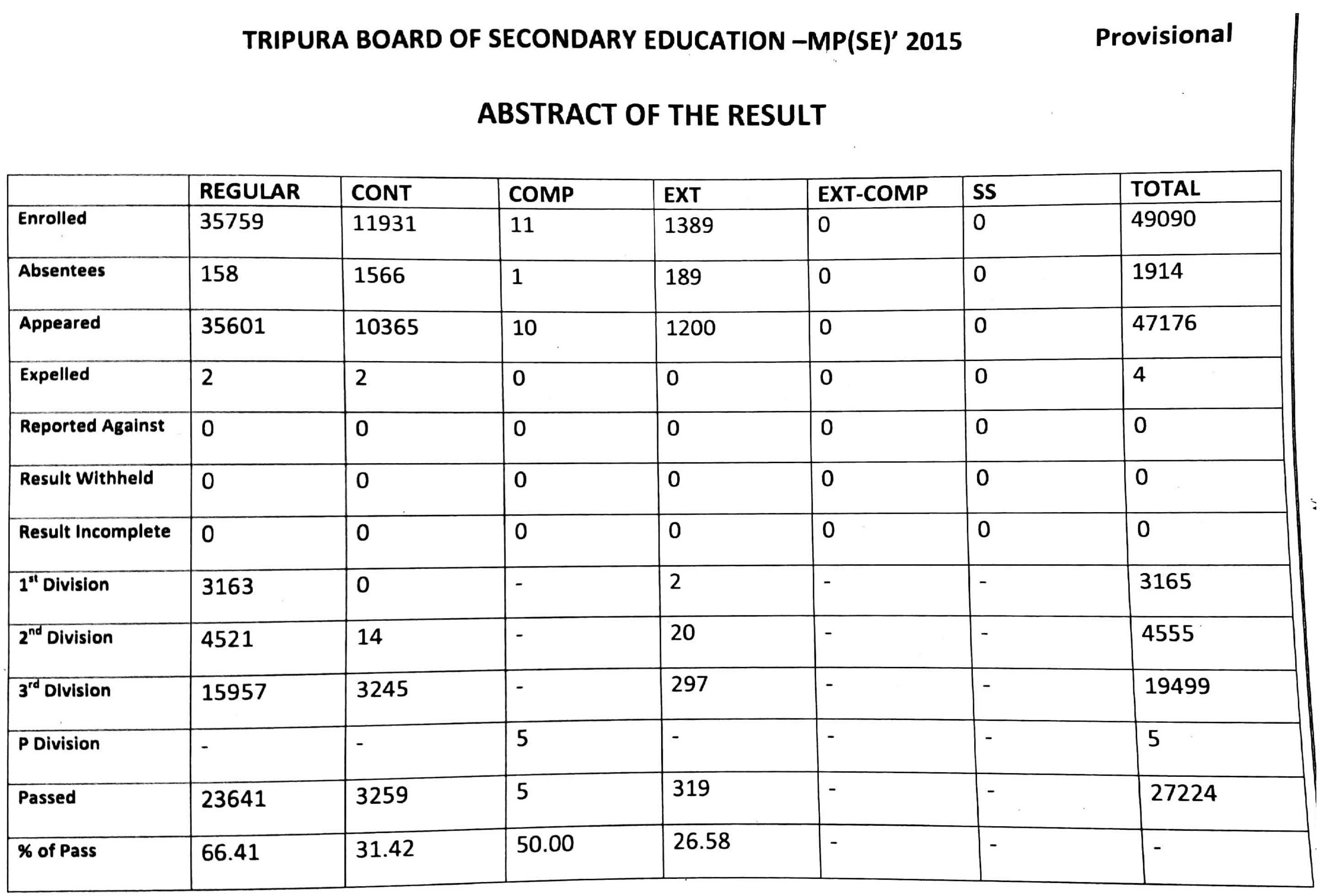


TRIPURA BOARD OF SECONDARY EDUCATION –MP(SE)' 2014 **Provisional**

ABSTRACT OF THE RESULT OF THE SCHOOLS UNDER TTA-ADC— MP(SE)'2014

	REGULAR	CONT	COMP	EXT	EXT-COMP	SS	TOTAL
Enrolled	7105	4229	3	597	0	0	11934
Absentees	30	490	0	109	0	0	629
Appeared	7075	3739	3	488	0	0	11305
Expelled	0	0	0	0	0	0	0
Reported Against	2	33	0	5	0	0	40
Result Withheld	0	0	0	0	0	0	0
Result Incomplete	0	0	0	0	0	0	0
1st Division	150	0	-	0	-	-	150
2nd Division	423	12	-	2	-	-	437
3rd Division	2679	1053	-	93	-	-	3825
P Division	-	-	2	-	-	-	2
Passed	3252	1065	2	95	-	-	4414
% of Pass	45.96	28.48	66.67	19.47	-	-	-

Madhyamik at TTAADC 2014



TRIPURA BOARD OF SECONDARY EDUCATION –MP(SE)' 2015 **Provisional**

ABSTRACT OF THE RESULT

	REGULAR	CONT	COMP	EXT	EXT-COMP	SS	TOTAL
Enrolled	35759	11931	11	1389	0	0	49090
Absentees	158	1566	1	189	0	0	1914
Appeared	35601	10365	10	1200	0	0	47176
Expelled	2	2	0	0	0	0	4
Reported Against	0	0	0	0	0	0	0
Result Withheld	0	0	0	0	0	0	0
Result Incomplete	0	0	0	0	0	0	0
1st Division	3163	0	-	2	-	-	3165
2nd Division	4521	14	-	20	-	-	4555
3rd Division	15957	3245	-	297	-	-	19499
P Division	-	-	5	-	-	-	5
Passed	23641	3259	5	319	-	-	27224
% of Pass	66.41	31.42	50.00	26.58	-	-	-

Madhyamik - 2015

TRIPURA BOARD OF SECONDARY EDUCATION –MP(SE)' 2016 Provisional

ABSTRACT OF THE RESULT

	REGULAR	CONT	COMP	EXT	EXT-COMP	SS	TOTAL
Enrolled	32863	13203	17	1369	0	0	47452
Absentees	122	1626	5	164	-	-	1917
Appeared	32741	11577	12	1205	-	-	45535
Expelled	0	1	0	0	-	-	1
Reported Against	0	0	0	0	-	-	0
Result Withheld	0	0	0	0	-	-	0
Result Incomplete	0	0	0	0	-	-	0
1st Division	2465	2	-	0	-	-	2467
2nd Division	3788	8	-	3	-	-	3799
3rd Division	15403	3238	-	298	-	-	18939
P Division	-	-	11	-	-	-	11
Passed	21656	3248	11	301	-	-	25216
% of Pass	66.14	28.06	91.67	24.98	-	-	-

Madhyamik - 2016

TRIPURA BOARD OF SECONDARY EDUCATION –MP(SE)' 2017

Provisional

ABSTRACT OF THE RESULT

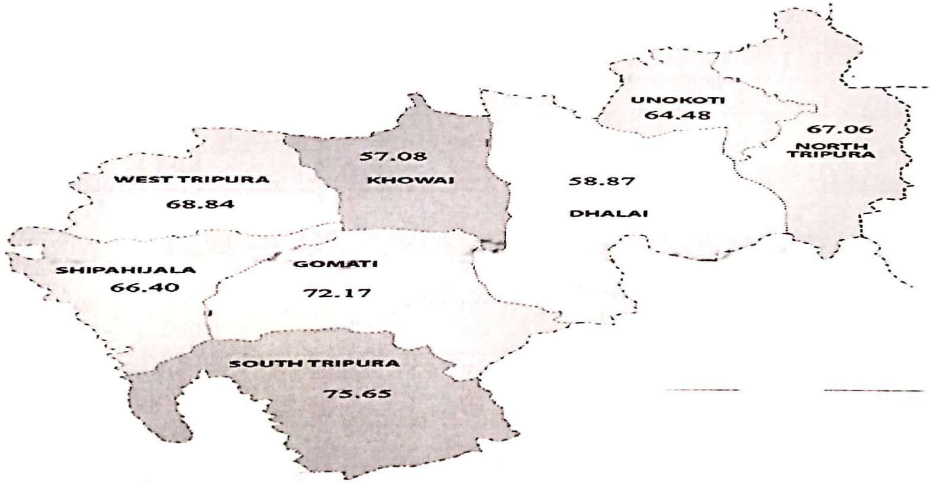
	REGULAR	CONT	COMP	EXT	EXT-COMP	SS	TOTAL
Enrolled	37262	12867	8	1157	0	0	51294
Absentees	140	1643	0	136	-	-	1919
Appeared	37122	11224	8	1021	-	-	49375
Expelled	0	0	0	2	-	-	2
Reported Against	0	0	0	0	-	-	0
Result Withheld	0	0	0	0	-	-	0
Result Incomplete	0	0	0	0	-	-	0
1st Division	4329	6	-	0	-	-	4335
2nd Division	5523	36	-	13	-	-	5572
3rd Division	15159	3943	-	273	-	-	19375
P Division	-	-	7	-	-	-	7
Passed	25011	3985	7	286	-	-	29289
% of Pass	67.38	35.50	87.50	28.01	-	-	-

Madhyamik - 2017

TRIPURA BOARD OF SECONDARY EDUCATION –MP(SE)' 2017
SUMMARY OF DISTRICT WISE RESULTS(REGULAR)

Provisional

District	Appeared	Passed	% of Pass
DHALAI	3190	1878	58.87
GOMATI	4308	3109	72.17
KHOWAI	3136	1790	57.08
NORTH	4080	2736	67.06
SEPHAIJALA	5452	3620	66.40
SOUTH	5096	3855	75.65
UNAKOTI	3238	2088	64.48
WEST	8622	5935	68.84



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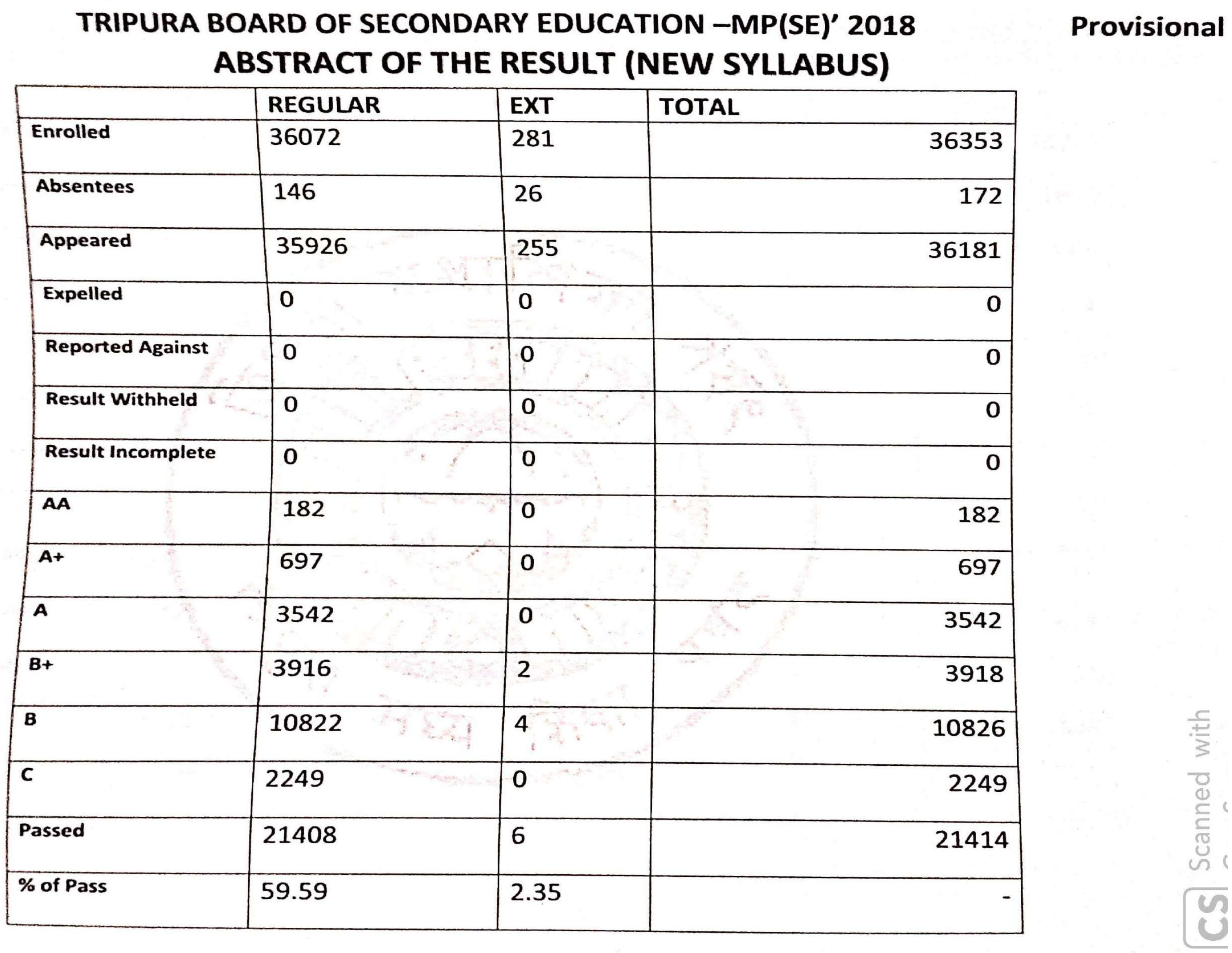
Madhyamik - 2017



TRIPURA BOARD OF SECONDARY EDUCATION –MP(SE)' 2018

Provisional

ABSTRACT OF THE RESULT (NEW SYLLABUS)

	REGULAR	EXT	TOTAL
Enrolled	36072	281	36353
Absentees	146	26	172
Appeared	35926	255	36181
Expelled	0	0	0
Reported Against	0	0	0
Result Withheld	0	0	0
Result Incomplete	0	0	0
AA	182	0	182
A+	697	0	697
A	3542	0	3542
B+	3916	2	3918
B	10822	4	10826
C	2249	0	2249
Passed	21408	6	21414
% of Pass	59.59	2.35	-

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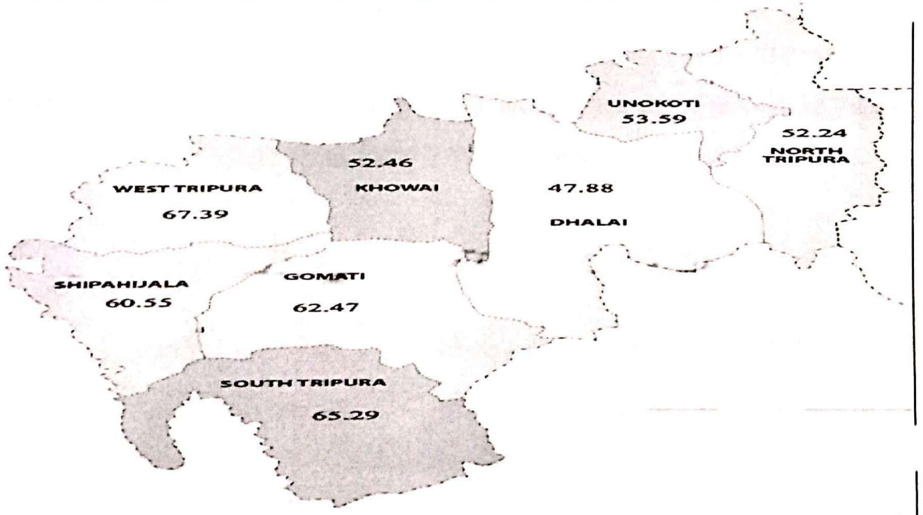
Madhyamik - 2018

TRIPURA BOARD OF SECONDARY EDUCATION –MP(SE)' 2018 Provisional

SUMMARY OF DISTRICT WISE RESULTS(REGULAR)

District	Appeared	Passed	% of Pass
DHALAI	3490	1671	47.88
GOMATI	4367	2728	62.47
KHOWAI	3235	1697	52.46
NORTH	3819	1995	52.24
SEPHAIJALA	5310	3215	60.55
SOUTH	4725	3085	65.29
UNAKOTI	2773	1486	53.59
WEST	8207	5531	67.39



Madhyamik - 2018

TRIPURA BOARD OF SECONDARY EDUCATION –MP(SE)' 2019

Provisional

ABSTRACT OF THE RESULT (NEW SYLLABUS)

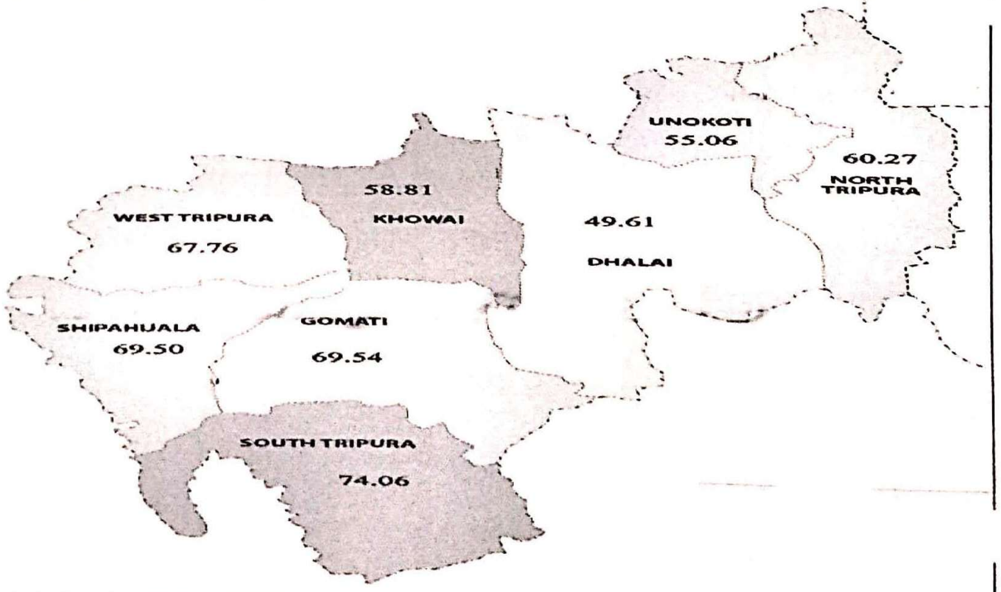
	REGULAR	EXT	CONT	COMP	TOTAL
Enrolled	33684	371	7942	2113	44110
Absentees	101	28	1060	109	1298
Appeared	33583	343	6882	2004	42812
Expelled	-	-	-	-	-
Reported Against	1	-	-	-	1
Result Withheld	-	-	-	-	-
Result Incomplete	-	-	-	-	-
AA	224	0	0	0	224
A+	961	0	0	1	962
A	4934	0	0	0	4934
B+	5197	0	24	12	5235
B	9807	10	939	929	11683
C	571	0	208	113	892
Passed	21694	10	1171	1055	23930
% of Pass	64.60	2.92	17.02	52.64	-

Madhyamik - 2019

TRIPURA BOARD OF SECONDARY EDUCATION –MP(SE)' 2019 Provisional

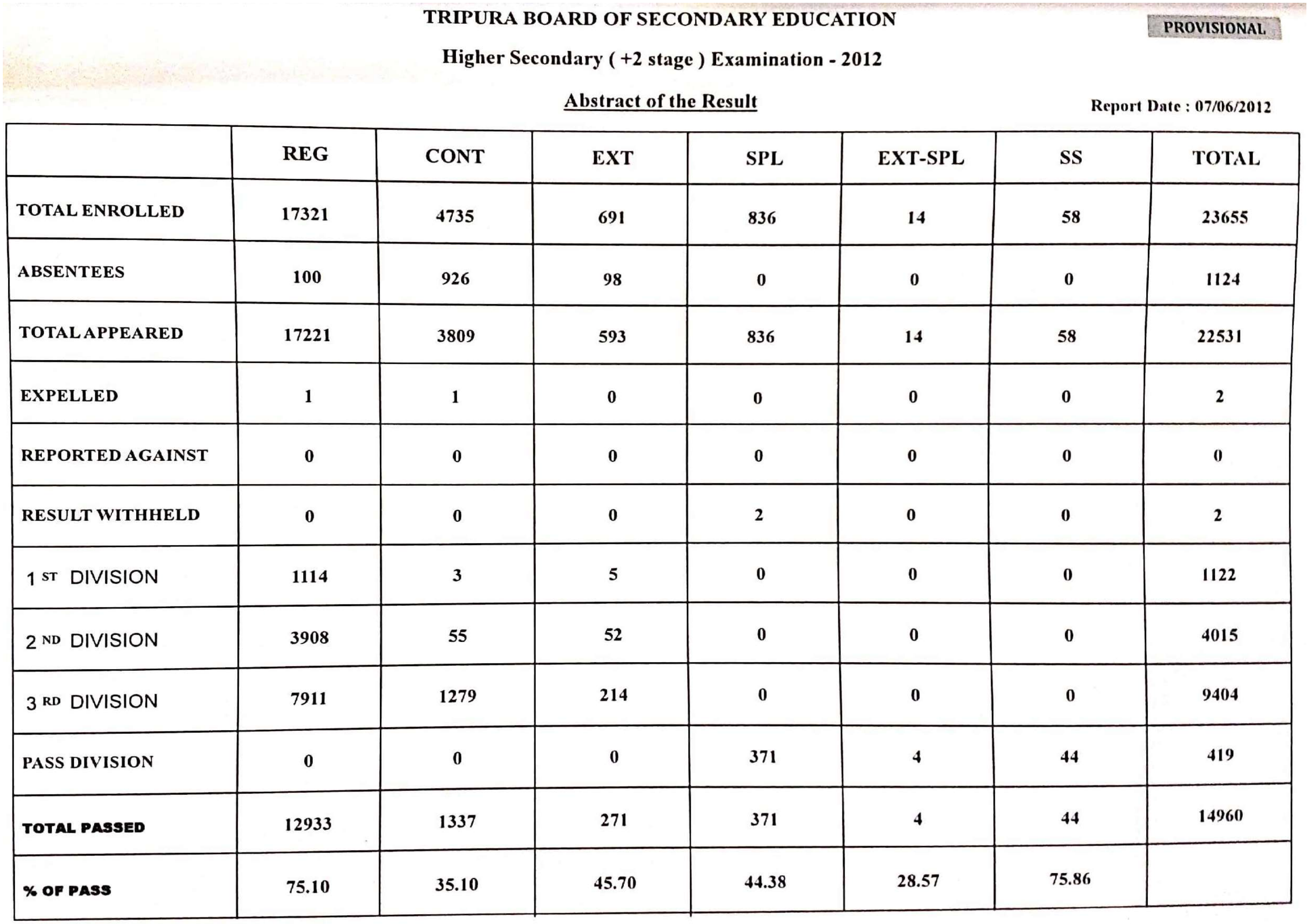
SUMMARY OF DISTRICT WISE RESULTS(REGULAR)

District	Appeared	Passed	% of Pass
DHALAI	3328	1651	49.61
GOMATI	3956	2751	69.54
KHOWAI	2809	1652	58.81
NORTH	3526	2125	60.27
SEPHAIJALA	4524	3144	69.50
SOUTH	4402	3260	74.06
UNAKOTI	2897	1595	55.06
WEST	8141	5516	67.76



Madhyamik - 2019

ABSTRACT OF TBSE RESULT SHEETS
OF
HS 2012-2019



PROVISIONAL

TRIPURA BOARD OF SECONDARY EDUCATION

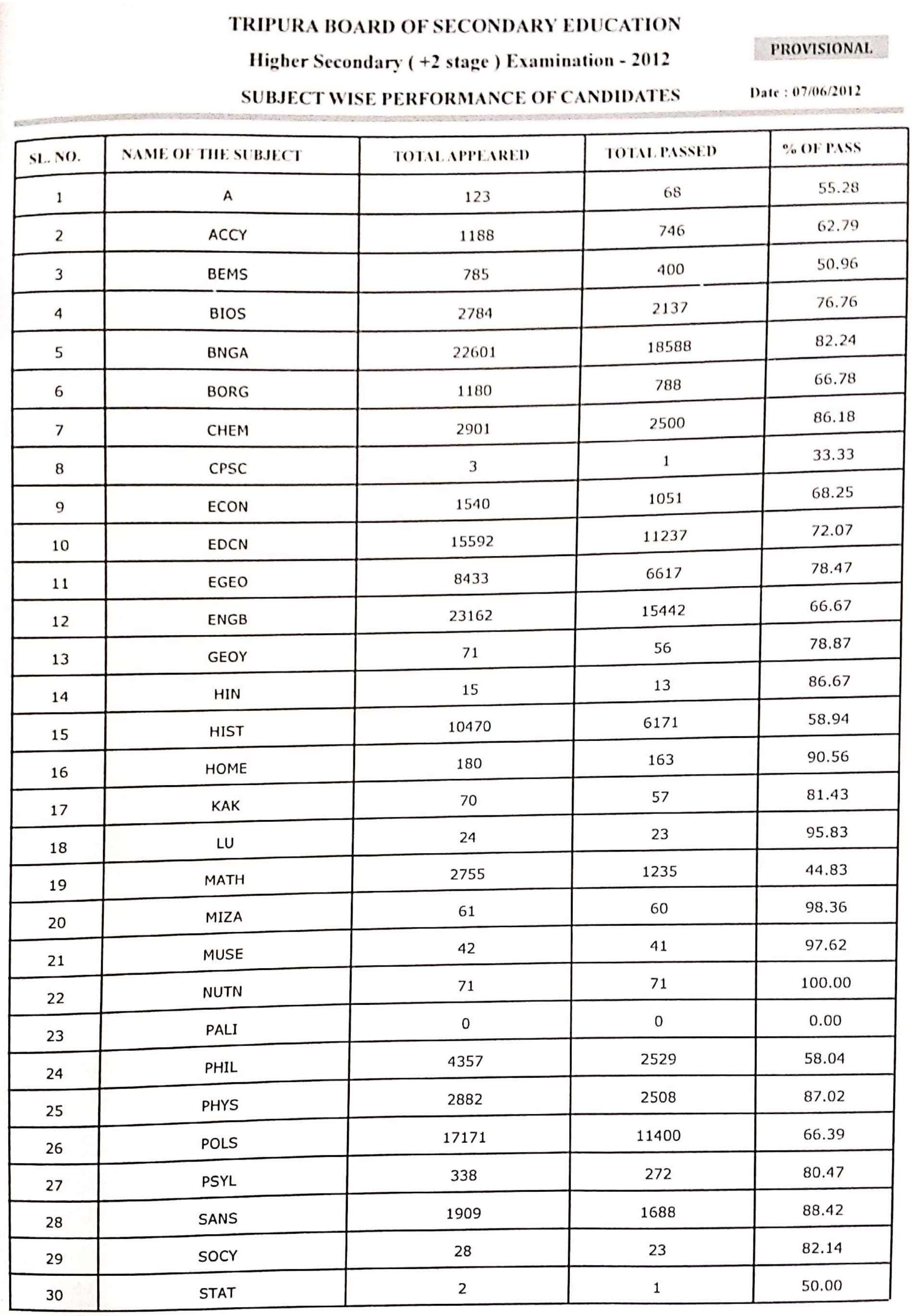
Higher Secondary (+2 stage) Examination - 2012

Abstract of the Result

Report Date : 07/06/2012

	REG	CONT	EXT	SPL	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	17321	4735	691	836	14	58	23655
ABSENTEES	100	926	98	0	0	0	1124
TOTAL APPEARED	17221	3809	593	836	14	58	22531
EXPELLED	1	1	0	0	0	0	2
REPORTED AGAINST	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	2	0	0	2
1 ST DIVISION	1114	3	5	0	0	0	1122
2 ND DIVISION	3908	55	52	0	0	0	4015
3 RD DIVISION	7911	1279	214	0	0	0	9404
PASS DIVISION	0	0	0	371	4	44	419
TOTAL PASSED	12933	1337	271	371	4	44	14960
% OF PASS	75.10	35.10	45.70	44.38	28.57	75.86	

HS 2012



TRIPURA BOARD OF SECONDARY EDUCATION
Higher Secondary (+2 stage) Examination - 2012
SUBJECT WISE PERFORMANCE OF CANDIDATES

PROVISIONAL

Date : 07/06/2012

SL. NO.	NAME OF THE SUBJECT	TOTAL APPEARED	TOTAL PASSED	% OF PASS
1	A	123	68	55.28
2	ACCY	1188	746	62.79
3	BEMS	785	400	50.96
4	BIOS	2784	2137	76.76
5	BNGA	22601	18588	82.24
6	BORG	1180	788	66.78
7	CHEM	2901	2500	86.18
8	CPSC	3	1	33.33
9	ECON	1540	1051	68.25
10	EDCN	15592	11237	72.07
11	EGEO	8433	6617	78.47
12	ENGB	23162	15442	66.67
13	GEOY	71	56	78.87
14	HIN	15	13	86.67
15	HIST	10470	6171	58.94
16	HOME	180	163	90.56
17	KAK	70	57	81.43
18	LU	24	23	95.83
19	MATH	2755	1235	44.83
20	MIZA	61	60	98.36
21	MUSE	42	41	97.62
22	NUTN	71	71	100.00
23	PALI	0	0	0.00
24	PHIL	4357	2529	58.04
25	PHYS	2882	2508	87.02
26	POLS	17171	11400	66.39
27	PSYL	338	272	80.47
28	SANS	1909	1688	88.42
29	SOCY	28	23	82.14
30	STAT	2	1	50.00

HS 2012

TRIPURA BOARD OF SECONDARY EDUCATION

Higher Secondary (+2 stage) Examination - 2012

PROVISIONAL

(Combined)

Gender & Category wise Statistics of Result

Report Date : 07/06/2012

Gender	Total Candidate Appeared (Category wise)		Total Candidate Passed (Category wise/Division wise)				Total Passed	% of Pass
	Category	Total Appeared	Category	1 st Division	2 nd Division	3 rd Division /Pass		
Male	REG	9942	REG	592	2138	4751	7481	75.25
	CONT	2237	CONT	1	34	719	754	33.71
	SPL	446	SPL	0	0	185	185	41.48
	EXT	426	EXT	3	35	160	198	46.48
	EXT-SPL	6	EXT-SPL	0	0	1	1	16.67
	SS	45	SS	0	0	34	34	75.56
	TOTAL	*13102*		596	2207	5850	*8653*	
Female	REG	7279	REG	522	1770	3160	5452	74.90
	CONT	1572	CONT	2	21	560	583	37.09
	SPL	390	SPL	0	0	186	186	47.69
	EXT	167	EXT	2	17	54	73	43.71
	EXT-SPL	8	EXT-SPL	0	0	3	3	37.50
	SS	13	SS	0	0	10	10	76.92
	TOTAL	*9429*		526	1808	3973	6307	

HS 2012

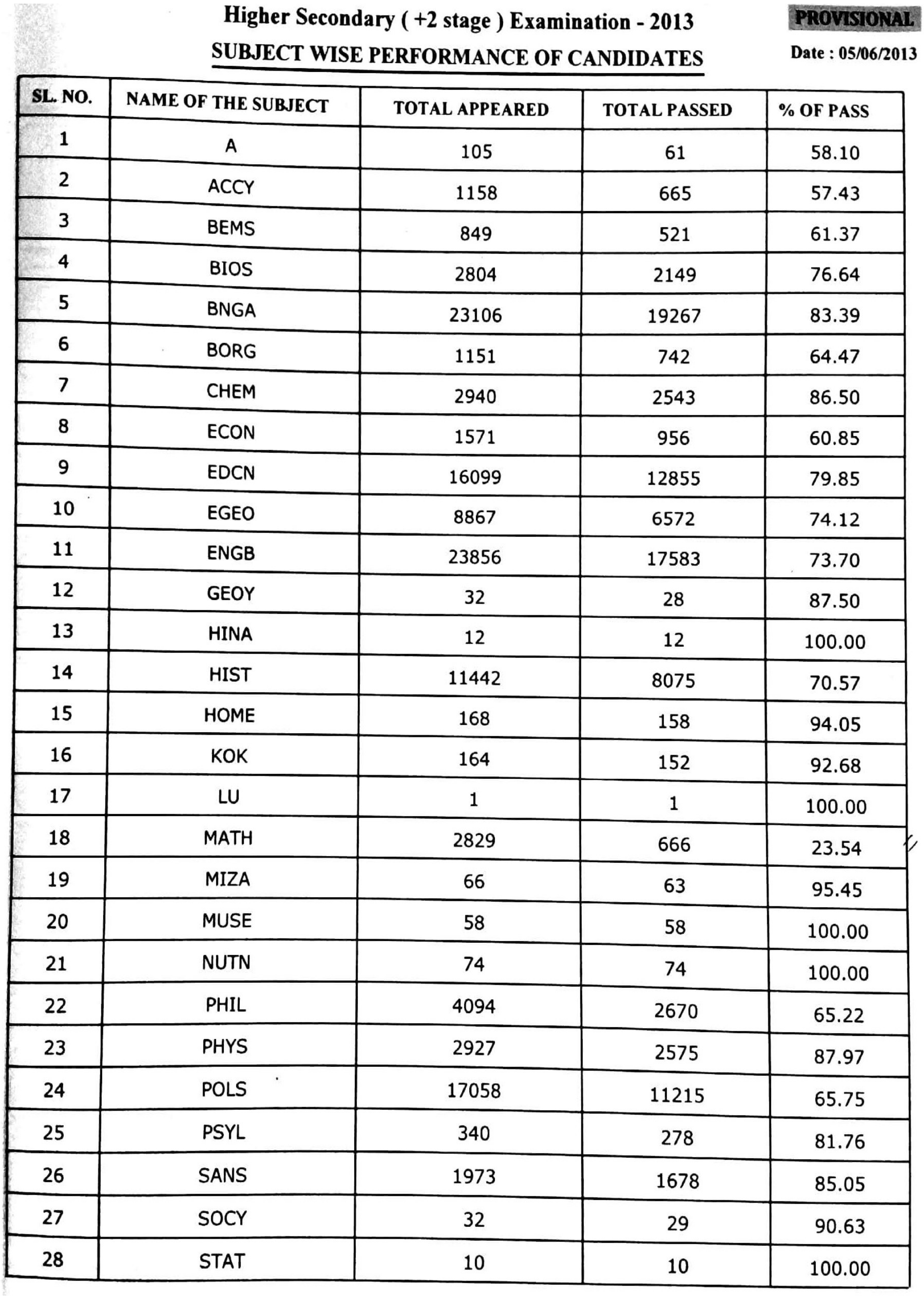
Higher Secondary (+2 stage) Examination - 2013

Abstract of the Result

Report Date : 05/06/2013

	REG	CONT	EXT	SPL	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	17206	4708	1418	723	7	73	24135
ABSENTEES	72	790	180	0	0	0	1042
TOTAL APPEARED	17134	3918	1238	723	7	73	23093
EXPELLED	3	4	5	0	0	0	12
REPORTED AGAINST	2	0	0	0	0	0	2
RESULT WITHHELD	0	0	0	0	0	0	0
1 ST DIVISION	1300	4	9	0	0	0	1313
2 ND DIVISION	4320	54	106	0	0	0	4480
3 RD DIVISION	8022	1502	510	0	0	0	10034
PASS DIVISION	0	0	0	344	3	21	368
TOTAL PASSED	13642	1560	625	344	3	21	16195
% OF PASS	79.62	39.82	50.48	47.58	42.86	28.77	

HS 2013



PROVISIONAL

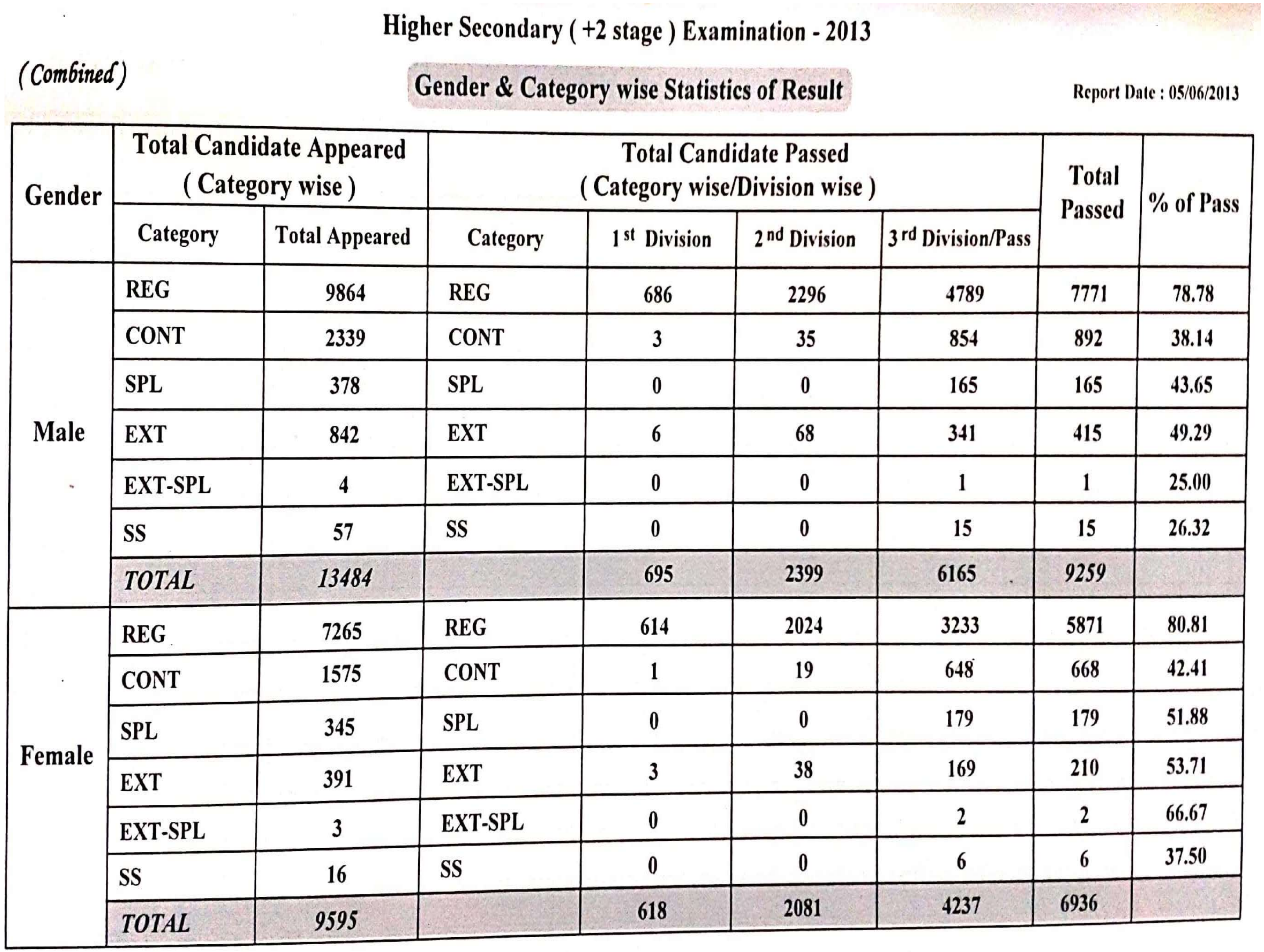
Higher Secondary (+2 stage) Examination - 2013

SUBJECT WISE PERFORMANCE OF CANDIDATES

Date : 05/06/2013

SL. NO.	NAME OF THE SUBJECT	TOTAL APPEARED	TOTAL PASSED	% OF PASS
1	A	105	61	58.10
2	ACCY	1158	665	57.43
3	BEMS	849	521	61.37
4	BIOS	2804	2149	76.64
5	BNGA	23106	19267	83.39
6	BORG	1151	742	64.47
7	CHEM	2940	2543	86.50
8	ECON	1571	956	60.85
9	EDCN	16099	12855	79.85
10	EGEO	8867	6572	74.12
11	ENGB	23856	17583	73.70
12	GEOY	32	28	87.50
13	HINA	12	12	100.00
14	HIST	11442	8075	70.57
15	HOME	168	158	94.05
16	KOK	164	152	92.68
17	LU	1	1	100.00
18	MATH	2829	666	23.54
19	MIZA	66	63	95.45
20	MUSE	58	58	100.00
21	NUTN	74	74	100.00
22	PHIL	4094	2670	65.22
23	PHYS	2927	2575	87.97
24	POLS	17058	11215	65.75
25	PSYL	340	278	81.76
26	SANS	1973	1678	85.05
27	SOCY	32	29	90.63
28	STAT	10	10	100.00

HS 2013



Higher Secondary (+2 stage) Examination - 2013

(Combined)

Gender & Category wise Statistics of Result

Report Date : 05/06/2013

Gender	Total Candidate Appeared (Category wise)		Total Candidate Passed (Category wise/Division wise)				Total Passed	% of Pass
	Category	Total Appeared	Category	1st Division	2nd Division	3rd Division/Pass		
Male	REG	9864	REG	686	2296	4789	7771	78.78
	CONT	2339	CONT	3	35	854	892	38.14
	SPL	378	SPL	0	0	165	165	43.65
	EXT	842	EXT	6	68	341	415	49.29
	EXT-SPL	4	EXT-SPL	0	0	1	1	25.00
	SS	57	SS	0	0	15	15	26.32
	TOTAL	*13484*		695	2399	6165	*9259*	
Female	REG	7265	REG	614	2024	3233	5871	80.81
	CONT	1575	CONT	1	19	648	668	42.41
	SPL	345	SPL	0	0	179	179	51.88
	EXT	391	EXT	3	38	169	210	53.71
	EXT-SPL	3	EXT-SPL	0	0	2	2	66.67
	SS	16	SS	0	0	6	6	37.50
	TOTAL	*9595*		618	2081	4237	6936	

HS 2013

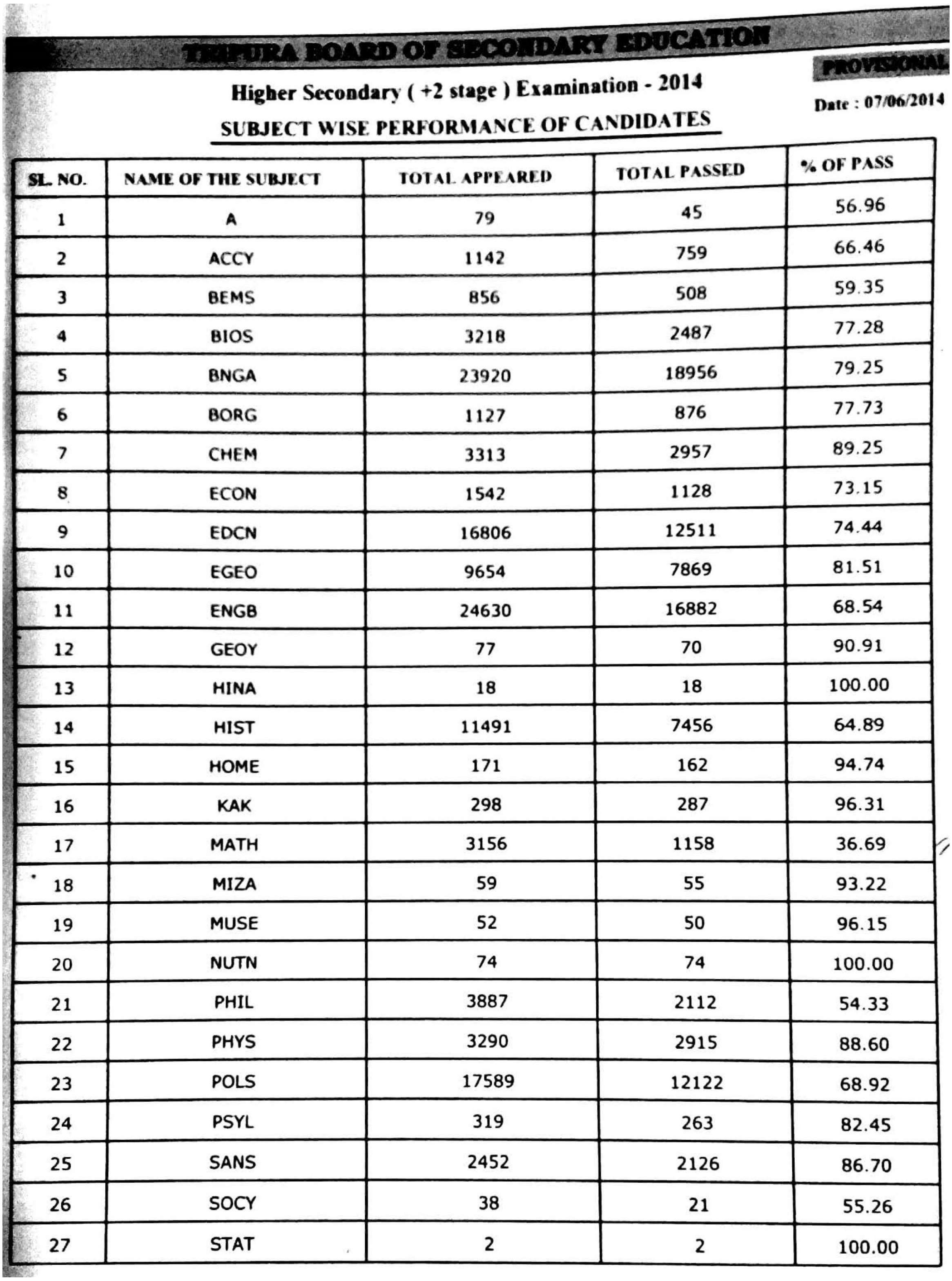
Higher Secondary (+2 stage) Examination - 2014

Abstract of the Result

Report Date : 07/06/2014

	REG	CONT	EXT	SPL	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	19165	3733	1368	718	24	123	25131
ABSENTEES	93	585	204	0	0	0	882
TOTAL APPEARED	19072	3148	1164	718	24	123	24249
EXPELLED	1	0	1	0	0	0	2
REPORTED AGAINST	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	0	0	0	0
1 ST DIVISION	1328	1	12	0	0	0	1341
2 ND DIVISION	4382	49	106	0	0	0	4537
3 RD DIVISION	8939	1131	417	0	0	0	10487
PASS DIVISION	0	0	0	322	10	77	409
TOTAL PASSED	14649	1181	535	322	10	77	16774 ✓
% OF PASS	76.81	37.52	45.96	44.85	41.67	62.60	

HS 2014



TRIPURA BOARD OF SECONDARY EDUCATION

PROVISIONAL

Higher Secondary (+2 stage) Examination - 2014

Date : 07/06/2014

SUBJECT WISE PERFORMANCE OF CANDIDATES

SL. NO.	NAME OF THE SUBJECT	TOTAL APPEARED	TOTAL PASSED	% OF PASS
1	A	79	45	56.96
2	ACCY	1142	759	66.46
3	BEMS	856	508	59.35
4	BIOS	3218	2487	77.28
5	BNGA	23920	18956	79.25
6	BORG	1127	876	77.73
7	CHEM	3313	2957	89.25
8	ECON	1542	1128	73.15
9	EDCN	16806	12511	74.44
10	EGEO	9654	7869	81.51
11	ENGB	24630	16882	68.54
12	GEOY	77	70	90.91
13	HINA	18	18	100.00
14	HIST	11491	7456	64.89
15	HOME	171	162	94.74
16	KAK	298	287	96.31
17	MATH	3156	1158	36.69
18	MIZA	59	55	93.22
19	MUSE	52	50	96.15
20	NUTN	74	74	100.00
21	PHIL	3887	2112	54.33
22	PHYS	3290	2915	88.60
23	POLS	17589	12122	68.92
24	PSYL	319	263	82.45
25	SANS	2452	2126	86.70
26	SOCY	38	21	55.26
27	STAT	2	2	100.00

HS 2014

Higher Secondary (+2 stage) Examination - 2014

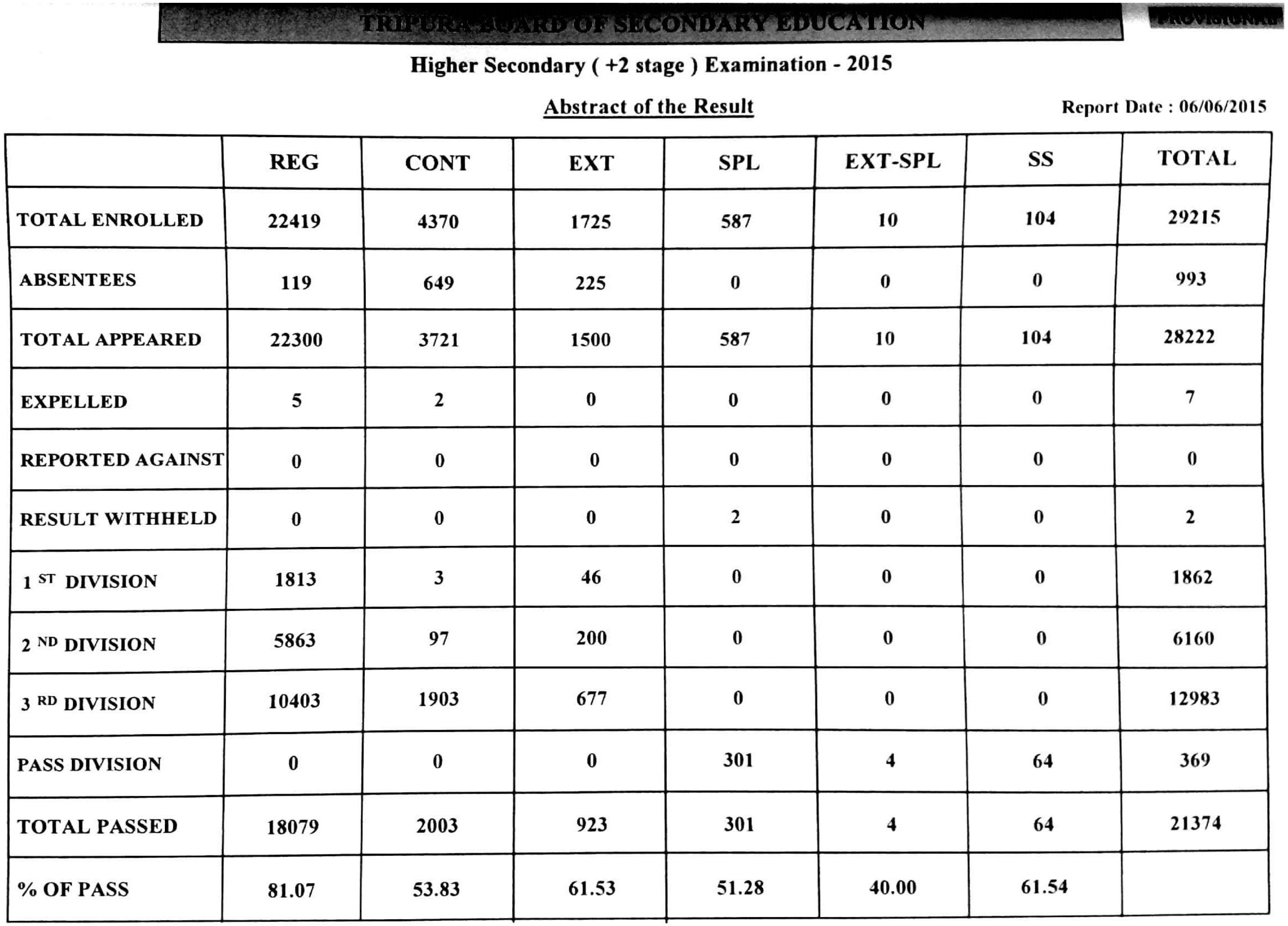
(Combined)

Gender & Category wise Statistics of Result

Report Date : 07/06/2014

Gender	Total Candidate Appeared (Category wise)		Total Candidate Passed (Category wise/Division wise)				Total Passed	% of Pass
	Category	Total Appeared	Category	1 st Division	2 nd Division	3 rd Division/Pass		
Male	REG	10712	REG	693	2265	5187	8145	76.04
	CONT	1939	CONT	1	31	705	737	38.01
	SPL	386	SPL	0	0	154	154	39.90
	EXT	707	EXT	2	45	247	294	41.58
	EXT-SPL	18	EXT-SPL	0	0	7	7	38.89
	SS	89	SS	0	0	55	55	61.80
	TOTAL	*13851*		696	2341	6355	*9392* ✓	
Female	REG	8359	REG	635	2117	3752	6504	77.81
	CONT	1209	CONT	0	18	426	444	36.72
	SPL	332	SPL	0	0	168	168	50.60
	EXT	456	EXT	10	61	170	241	52.85
	EXT-SPL	6	EXT-SPL	0	0	3	3	50.00
	SS	34	SS	0	0	22	22	64.71
	TOTAL	*10396*		645	2196	4541	7382 ✓	

HS 2014



TRIPURA BOARD OF SECONDARY EDUCATION

PROVISIONAL

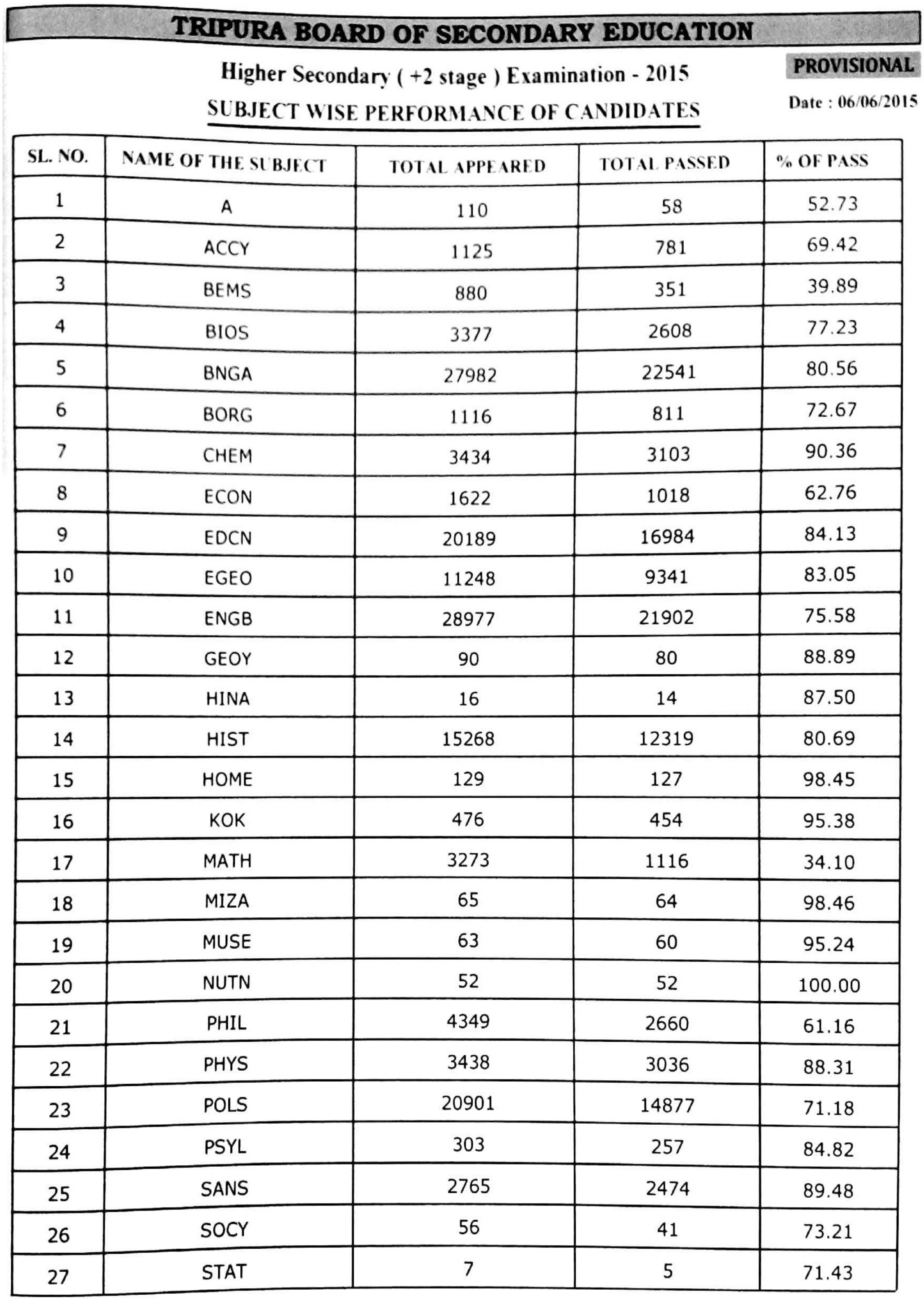
Higher Secondary (+2 stage) Examination - 2015

Abstract of the Result

Report Date : 06/06/2015

	REG	CONT	EXT	SPL	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	22419	4370	1725	587	10	104	29215
ABSENTEES	119	649	225	0	0	0	993
TOTAL APPEARED	22300	3721	1500	587	10	104	28222
EXPELLED	5	2	0	0	0	0	7
REPORTED AGAINST	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	2	0	0	2
1ST DIVISION	1813	3	46	0	0	0	1862
2ND DIVISION	5863	97	200	0	0	0	6160
3RD DIVISION	10403	1903	677	0	0	0	12983
PASS DIVISION	0	0	0	301	4	64	369
TOTAL PASSED	18079	2003	923	301	4	64	21374
% OF PASS	81.07	53.83	61.53	51.28	40.00	61.54	

HS 2015



TRIPURA BOARD OF SECONDARY EDUCATION

Higher Secondary (+2 stage) Examination - 2015

PROVISIONAL

SUBJECT WISE PERFORMANCE OF CANDIDATES

Date : 06/06/2015

SL. NO.	NAME OF THE SUBJECT	TOTAL APPEARED	TOTAL PASSED	% OF PASS
1	A	110	58	52.73
2	ACCY	1125	781	69.42
3	BEMS	880	351	39.89
4	BIOS	3377	2608	77.23
5	BNGA	27982	22541	80.56
6	BORG	1116	811	72.67
7	CHEM	3434	3103	90.36
8	ECON	1622	1018	62.76
9	EDCN	20189	16984	84.13
10	EGEO	11248	9341	83.05
11	ENGB	28977	21902	75.58
12	GEOY	90	80	88.89
13	HINA	16	14	87.50
14	HIST	15268	12319	80.69
15	HOME	129	127	98.45
16	KOK	476	454	95.38
17	MATH	3273	1116	34.10
18	MIZA	65	64	98.46
19	MUSE	63	60	95.24
20	NUTN	52	52	100.00
21	PHIL	4349	2660	61.16
22	PHYS	3438	3036	88.31
23	POLS	20901	14877	71.18
24	PSYL	303	257	84.82
25	SANS	2765	2474	89.48
26	SOCY	56	41	73.21
27	STAT	7	5	71.43

HS 2015

Higher Secondary (+2 stage) Examination - 2015

(Combined)

Gender & Category wise Statistics of Result

Report Date : 06/06/2015

Gender	Total Candidate Appeared (Category wise)		Total Candidate Passed (Category wise/Division wise)				Total Passed	% of Pass
	Category	Total Appeared	Category	1 st Division	2 nd Division	3 rd Division/Pass		
Male	REG	12656	REG	890	3130	6058	10078	79.63
	CONT	2195	CONT	1	48	1036	1085	49.43
	SPL	336	SPL	0	0	148	148	44.05
	EXT	910	EXT	17	97	396	510	56.04
	EXT-SPL	6	EXT-SPL	0	0	3	3	50.00
	SS	67	SS	0	0	43	43	64.18
	TOTAL	*16170*		908	3275	7684	*11867*	
Female	REG	9639	REG	923	2733	4345	8001	83.01
	CONT	1524	CONT	2	49	867	918	60.24
	SPL	249	SPL	0	0	153	153	61.45
	EXT	590	EXT	29	103	281	413	70.00
	EXT-SPL	4	EXT-SPL	0	0	1	1	25.00
	SS	37	SS	0	0	21	21	56.76
	TOTAL	*12043*		954	2885	5668	9507	

HS 2015

Higher Secondary (+2 stage) Examination - 2016

(Humanities)

Abstract of the Result

Report Date : 07/06/2016

	REG	CONT	EXT	SPL	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	16977	3157	634	427	10	130	21335
ABSENTEES	0	599	75	0	0	0	674
TOTAL APPEARED	16977	2558	559	427	10	130	20661
EXPELLED	3	1	0	0	0	0	4
REPORTED AGAINST	0	0	1	0	0	0	1
RESULT WITHHELD	0	0	1	0	0	0	1
1 ST DIVISION	NA	1	NA	0	0	0	1
2 ND DIVISION	NA	40	NA	0	0	0	40
3 RD DIVISION	NA	935	NA	0	0	0	935
PASS DIVISION	NA	0	NA	283	7	90	380
TOTAL PASSED	12569	976	318	283	7	90	14243
% OF PASS	74.04	38.15	56.89	66.28	70.00	69.23	

HS 2016

Higher Secondary (+2 stage) Examination - 2016

(Commerce)

Abstract of the Result

Report Date : 07/06/2016

	REG	CONT	EXT	SPL	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	845	161	4	0	1	0	1011
ABSENTEES	0	25	0	0	0	0	25
TOTAL APPEARED	845	136	4	0	1	0	986
EXPELLED	0	0	0	0	0	0	0
REPORTED AGAINST	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	0	0	0	0
1 ST DIVISION	NA	0	NA	0	0	0	0
2 ND DIVISION	NA	3	NA	0	0	0	3
3 RD DIVISION	NA	65	NA	0	0	0	65
PASS DIVISION	NA	0	NA	0	1	0	1
TOTAL PASSED	607	68	1	0	1	0	677
% OF PASS	71.83	50.00	25.00	0.00	100.00	0.00	

HS 2016

Higher Secondary (+2 stage) Examination - 2016

(Science)

Abstract of the Result

Report Date : 07/06/2016

	REG	CONT	EXT	SPL	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	3319	214	1	69	0	6	3609
ABSENTEES	0	16	0	0	0	0	16
TOTAL APPEARED	3319	198	1	69	0	6	3593
EXPELLED	0	0	0	0	0	0	0
REPORTED AGAINST	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	0	0	0	0
1 ST DIVISION	NA	7	NA	0	0	0	7
2 ND DIVISION	NA	51	NA	0	0	0	51
3 RD DIVISION	NA	69	NA	0	0	0	69
PASS DIVISION	NA	0	NA	41	0	6	47
TOTAL PASSED	2702	127	0	41	0	6	2876
% OF PASS	81.41	64.14	0.00	59.42	0.00	100.00	

HS 2016

TRIPURA BOARD OF SECONDARY EDUCATION

PROVISIONAL

Higher Secondary (+2 stage) Examination - 2017

(Humanities)

Abstract of the Result

Report Date : 07/06/2017

	REG	CONT	EXT	COMP	SPL	EXT-COMP	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	16958	3749	542	403	131	2	1	11	21797
ABSENTEES	0	261	72	0	0	0	0	0	333
TOTAL APPEARED	16958	3488	470	403	131	2	1	11	21464
EXPELLED	2	1	0	0	0	0	0	0	3
REPORTED AGAINST	0	0	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	0	0	0	0	0	0
1 ST DIVISION	NA	1	NA	0	0	0	0	0	1
2 ND DIVISION	NA	7	NA	0	0	0	0	0	7
3 RD DIVISION	NA	246	NA	0	0	0	0	0	246
PASS DIVISION	NA	895	NA	322	79	1	0	6	1303
TOTAL PASSED	12924	1149	239	322	79	1	0	6	14720
% OF PASS	76.21	32.94	50.85	79.90	60.31	50.00	0.00	54.55	

HS 2017

TRIPURA BOARD OF SECONDARY EDUCATION

PROVISIONAL

Higher Secondary (+2 stage) Examination - 2017

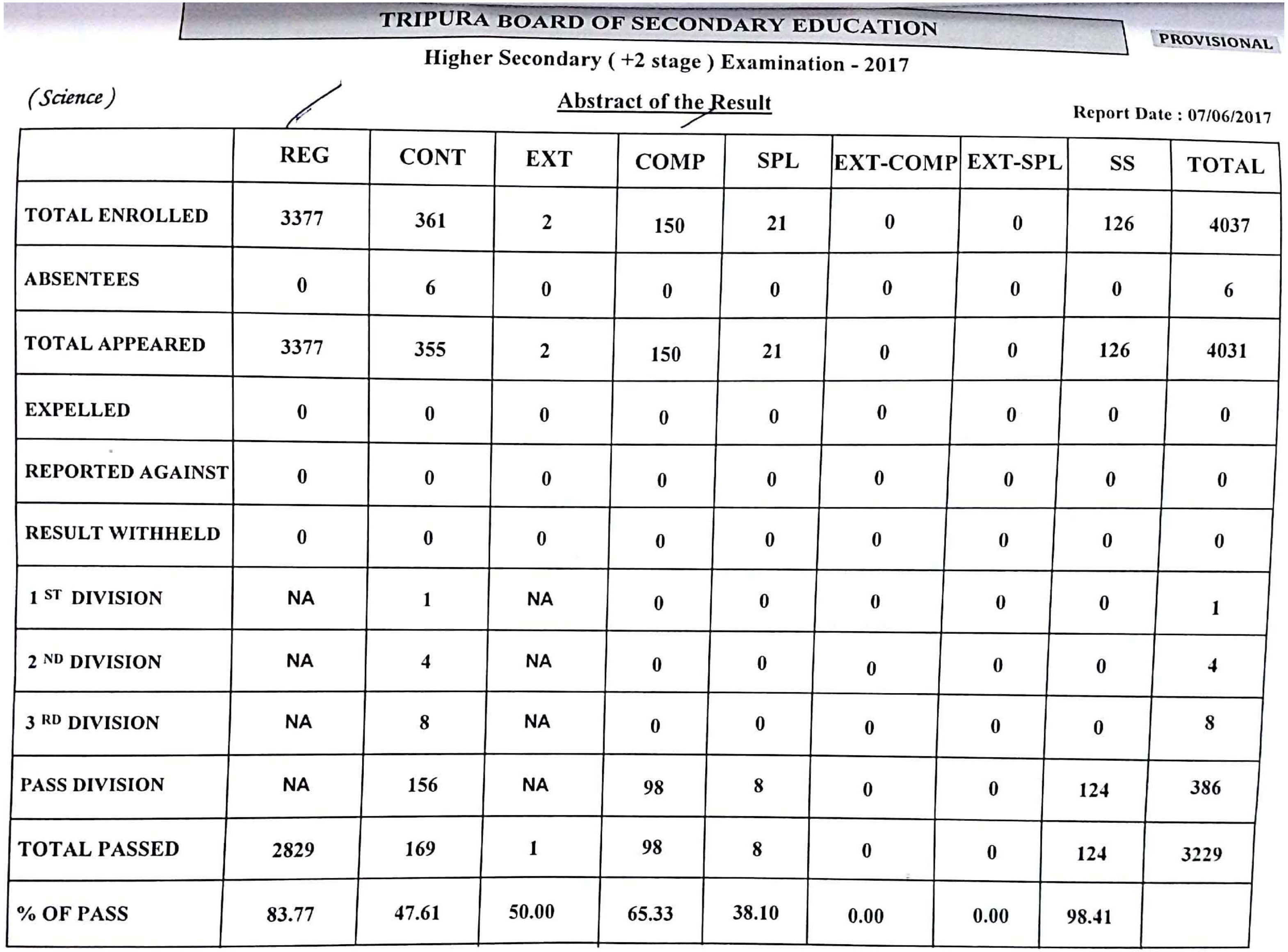
(Commerce)

Abstract of the Result

Report Date : 07/06/2017

	REG	CONT	EXT	COMP	SPL	EXT-COMP	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	808	161	4	37	9	0	0	0	1019
ABSENTEES	0	6	0	0	0	0	0	0	6
TOTAL APPEARED	808	155	4	37	9	0	0	0	1013
EXPELLED	0	0	0	0	0	0	0	0	0
REPORTED AGAINST	0	0	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	0	0	0	0	0	0
1 ST DIVISION	NA	0	NA	0	0	0	0	0	0
2 ND DIVISION	NA	1	NA	0	0	0	0	0	1
3 RD DIVISION	NA	9	NA	0	0	0	0	0	9
PASS DIVISION	NA	45	NA	29	7	0	0	0	81
TOTAL PASSED	592	55	1	29	7	0	0	0	684
% OF PASS	73.27	35.48	25.00	78.38	77.78	0.00	0.00	0.00	

HS 2017



TRIPURA BOARD OF SECONDARY EDUCATION

PROVISIONAL

Higher Secondary (+2 stage) Examination - 2017

(Science)

Abstract of the Result

Report Date : 07/06/2017

	REG	CONT	EXT	COMP	SPL	EXT-COMP	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	3377	361	2	150	21	0	0	126	4037
ABSENTEES	0	6	0	0	0	0	0	0	6
TOTAL APPEARED	3377	355	2	150	21	0	0	126	4031
EXPELLED	0	0	0	0	0	0	0	0	0
REPORTED AGAINST	0	0	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	0	0	0	0	0	0
1 ST DIVISION	NA	1	NA	0	0	0	0	0	1
2 ND DIVISION	NA	4	NA	0	0	0	0	0	4
3 RD DIVISION	NA	8	NA	0	0	0	0	0	8
PASS DIVISION	NA	156	NA	98	8	0	0	124	386
TOTAL PASSED	2829	169	1	98	8	0	0	124	3229
% OF PASS	83.77	47.61	50.00	65.33	38.10	0.00	0.00	98.41	

HS 2017

Higher Secondary (+2 stage) Examination - 2018

(Humanities)

Abstract of the Result

Report Date : 07/06/2018

	REG	CONT	EXT	COMP	SPL	EXT-COMP	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	16543	3502	476	361	15	2	0	3	20902
ABSENTEES	0	40	37	0	0	0	0	0	77
TOTAL APPEARED	16542	3462	439	361	15	2	0	3	20824
EXPELLED	2	0	0	0	0	0	0	0	2
REPORTED AGAINST	1	0	0	0	0	0	0	0	1
RESULT WITHHELD	0	0	0	0	0	0	0	0	0
1 ST DIVISION	NA	0	NA	0	0	0	0	0	0
2 ND DIVISION	NA	3	NA	0	0	0	0	0	3
3 RD DIVISION	NA	52	NA	0	0	0	0	0	52
PASS DIVISION	NA	1043	NA	249	10	0	0	0	1302
TOTAL PASSED	12931	1098	233	249	10	0	0	0	14521
% OF PASS	78.17	31.72	53.08	68.98	66.67	0.00	0.00	0.00	

HS 2018

Higher Secondary (+2 stage) Examination - 2018

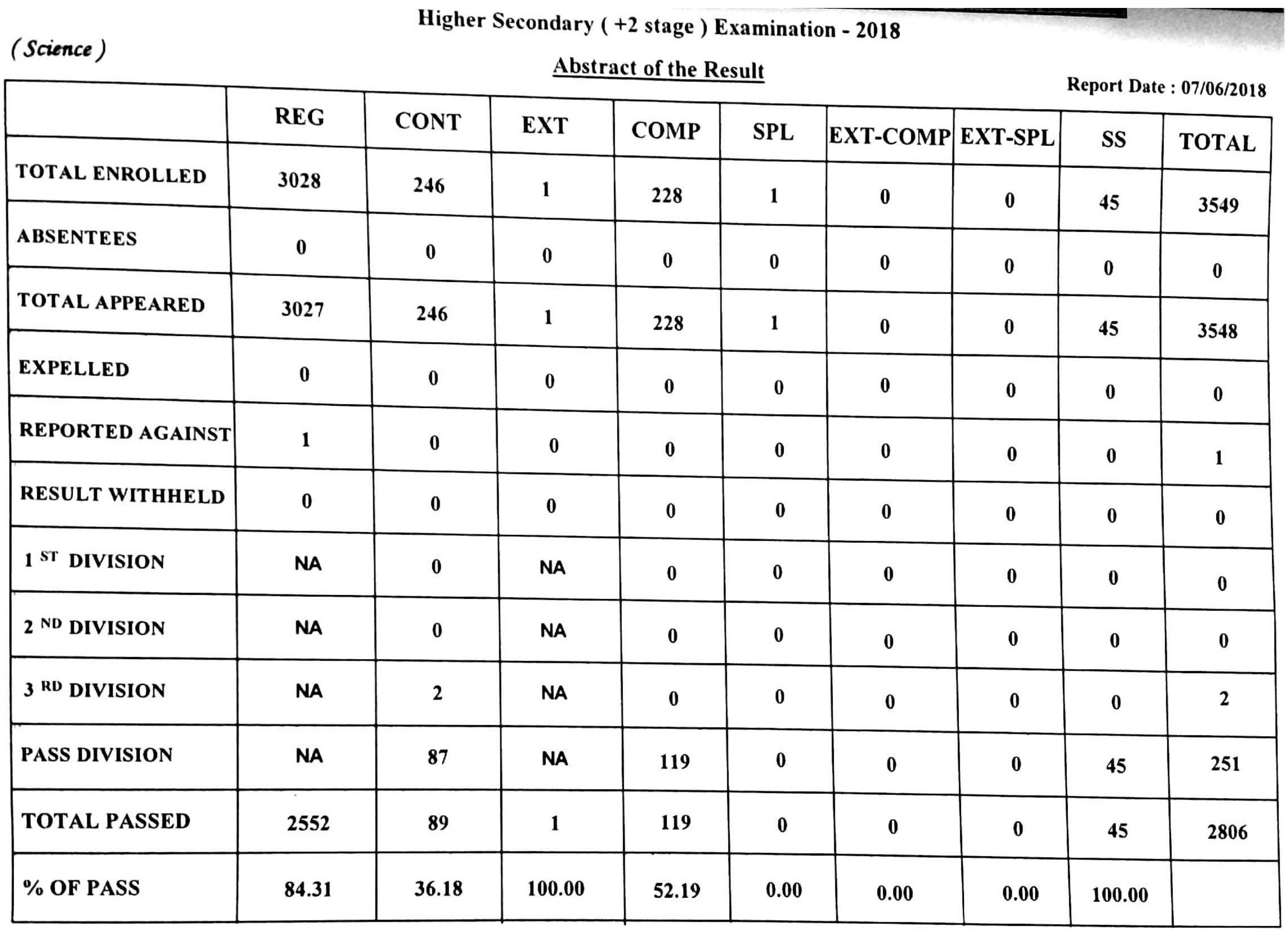
(Commerce)

Abstract of the Result

Report Date : 07/06/2018

	REG	CONT	EXT	COMP	SPL	EXT-COMP	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	847	189	5	30	1	0	0	0	1072
ABSENTEES	0	1	0	0	0	0	0	0	1
TOTAL APPEARED	847	188	5	30	1	0	0	0	1071
EXPELLED	0	0	0	0	0	0	0	0	0
REPORTED AGAINST	0	0	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	0	0	0	0	0	0
1 ST DIVISION	NA	0	NA	0	0	0	0	0	0
2 ND DIVISION	NA	0	NA	0	0	0	0	0	0
3 RD DIVISION	NA	3	NA	0	0	0	0	0	3
PASS DIVISION	NA	42	NA	15	1	0	0	0	58
TOTAL PASSED	569	45	3	15	1	0	0	0	633
% OF PASS	67.18	23.94	60.00	50.00	100.00	0.00	0.00	0.00	

HS 2018



(Science)

Higher Secondary (+2 stage) Examination - 2018

Abstract of the Result

Report Date : 07/06/2018

	REG	CONT	EXT	COMP	SPL	EXT-COMP	EXT-SPL	SS	TOTAL
TOTAL ENROLLED	3028	246	1	228	1	0	0	45	3549
ABSENTEES	0	0	0	0	0	0	0	0	0
TOTAL APPEARED	3027	246	1	228	1	0	0	45	3548
EXPELLED	0	0	0	0	0	0	0	0	0
REPORTED AGAINST	1	0	0	0	0	0	0	0	1
RESULT WITHHELD	0	0	0	0	0	0	0	0	0
1 ST DIVISION	NA	0	NA	0	0	0	0	0	0
2 ND DIVISION	NA	0	NA	0	0	0	0	0	0
3 RD DIVISION	NA	2	NA	0	0	0	0	0	2
PASS DIVISION	NA	87	NA	119	0	0	0	45	251
TOTAL PASSED	2552	89	1	119	0	0	0	45	2806
% OF PASS	84.31	36.18	100.00	52.19	0.00	0.00	0.00	100.00	

HS 2018

TRIPURA BOARD OF SECONDARY EDUCATION

PROVISIONAL

Higher Secondary (+2 stage) Examination - 2019

(Combined)

Abstract of the Result

Report Date : 06/06/2019

	REG	CONT	EXT	COMP	EXT-COMP	SS	TOTAL
TOTAL ENROLLED	22438	3182	759	780	0	38	27197
ABSENTEES	0	0	42	0	0	0	42
TOTAL APPEARED	22438	3182	717	780	0	38	27155
EXPELLED	0	0	0	0	0	0	0
REPORTED AGAINST	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	0	0	0	0
TOTAL PASSED	18064	905	482	504	0	38	19993
GRADE AA	37	0	0	0	0	0	37
GRADE A+	413	2	1	0	0	0	416
GRADE A	4519	17	44	9	0	14	4603
GRADE B+	4254	68	69	97	0	17	4505
GRADE B	8737	777	219	392	0	7	10132
GRADE C	104	41	149	6	0	0	300
GRADE D	4374	2277	277	276	0	0	7204
% OF PASS	80.51	28.44	67.22	64.62	0.00	100.00	

HS 2019

TRIPURA BOARD OF SECONDARY EDUCATION

PROVISIONAL

Higher Secondary (+2 stage) Examination - 2019

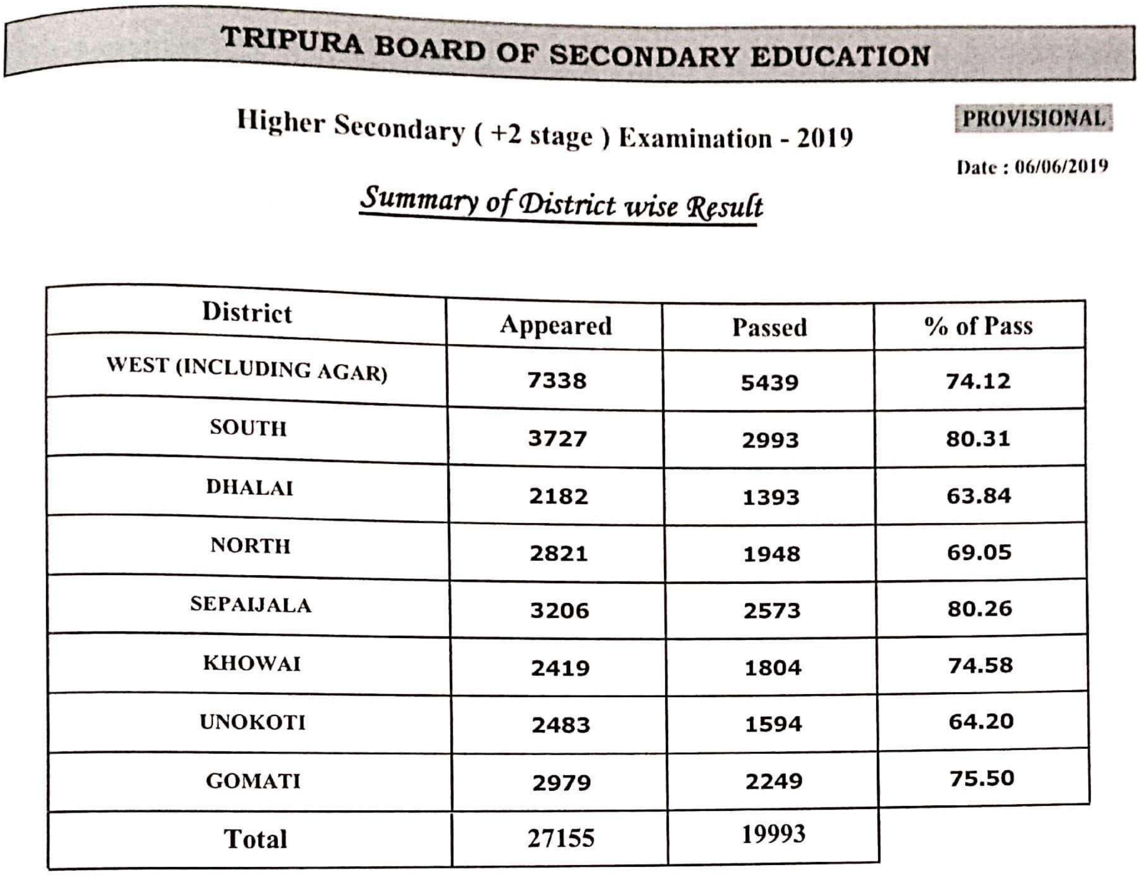
(Commerce)

Abstract of the Result

Report Date : 06/06/2019

	REG	CONT	EXT	COMP	EXT-COMP	SS	TOTAL
TOTAL ENROLLED	686	208	8	58	0	0	960
ABSENTEES	0	0	0	0	0	0	0
TOTAL APPEARED	686	208	8	58	0	0	960
EXPELLED	0	0	0	0	0	0	0
REPORTED AGAINST	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	0	0	0	0
TOTAL PASSED	536	74	3	47	0	0	660
GRADE AA	0	0	0	0	0	0	0
GRADE A+	4	0	0	0	0	0	4
GRADE A	92	0	0	0	0	0	92
GRADE B+	142	6	0	2	0	0	150
GRADE B	298	68	2	44	0	0	412
GRADE C	0	0	1	1	0	0	2
GRADE D	150	134	5	11	0	0	300
% OF PASS	78.13	35.58	37.50	81.03	0.00	0.00	

HS 2019



TRIPURA BOARD OF SECONDARY EDUCATION

Higher Secondary (+2 stage) Examination - 2019

PROVISIONAL

Date : 06/06/2019

Summary of District wise Result

District	Appeared	Passed	% of Pass
WEST (INCLUDING AGAR)	7338	5439	74.12
SOUTH	3727	2993	80.31
DHALAI	2182	1393	63.84
NORTH	2821	1948	69.05
SEPAIJALA	3206	2573	80.26
KHOWAI	2419	1804	74.58
UNOKOTI	2483	1594	64.20
GOMATI	2979	2249	75.50
Total	27155	19993	

HS 2019

TRIPURA BOARD OF SECONDARY EDUCATION

PROVISIONAL

Higher Secondary (+2 stage) Examination - 2019

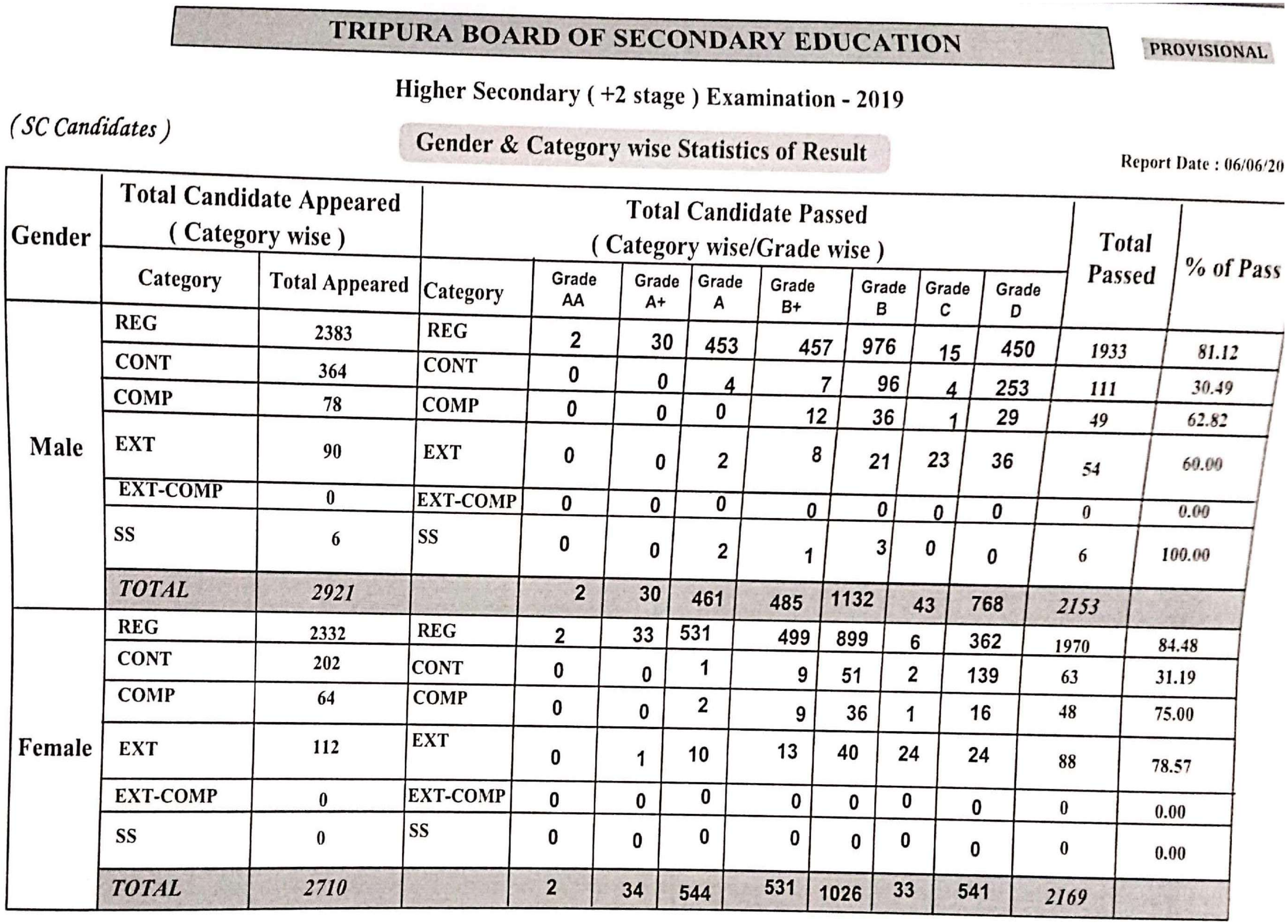
(Combined)

Gender & Category wise Statistics of Result

Report Date : 06/06/2019

Gender	Total Candidate Appeared (Category wise)		Total Candidate Passed (Category wise/Grade wise)								Total Passed	% of Pass
	Category	Total Appeared	Category	Grade AA	Grade A+	Grade A	Grade B+	Grade B	Grade C	Grade D		
Male	REG	11241	REG	25	212	2037	2086	4472	60	2349	8892	79.10
	CONT	1886	CONT	0	1	13	38	455	22	1357	529	28.05
	COMP	430	COMP	0	0	6	57	203	5	159	271	63.02
	EXT	318	EXT	0	0	9	17	63	72	157	161	50.63
	EXT-COMP	0	EXT-COMP	0	0	0	0	0	0	0	0	0.00
	SS	31	SS	0	0	11	13	7	0	0	31	100.00
	TOTAL	*13906*		25	213	2076	2211	5200	159	4022	*9884*	
Female	REG	11197	REG	12	201	2482	2168	4265	44	2025	9172	81.91
	CONT	1296	CONT	0	1	4	30	322	19	920	376	29.01
	COMP	350	COMP	0	0	3	40	189	1	117	233	66.57
	EXT	399	EXT	0	1	35	52	156	77	78	321	80.45
	EXT-COMP	0	EXT-COMP	0	0	0	0	0	0	0	0	0.00
	SS	7	SS	0	0	3	4	0	0	0	7	100.00
	TOTAL	*13249*		12	203	2527	2303	4932	141	3140	*10109*	

HS 2019



TRIPURA BOARD OF SECONDARY EDUCATION

PROVISIONAL

Higher Secondary (+2 stage) Examination - 2019

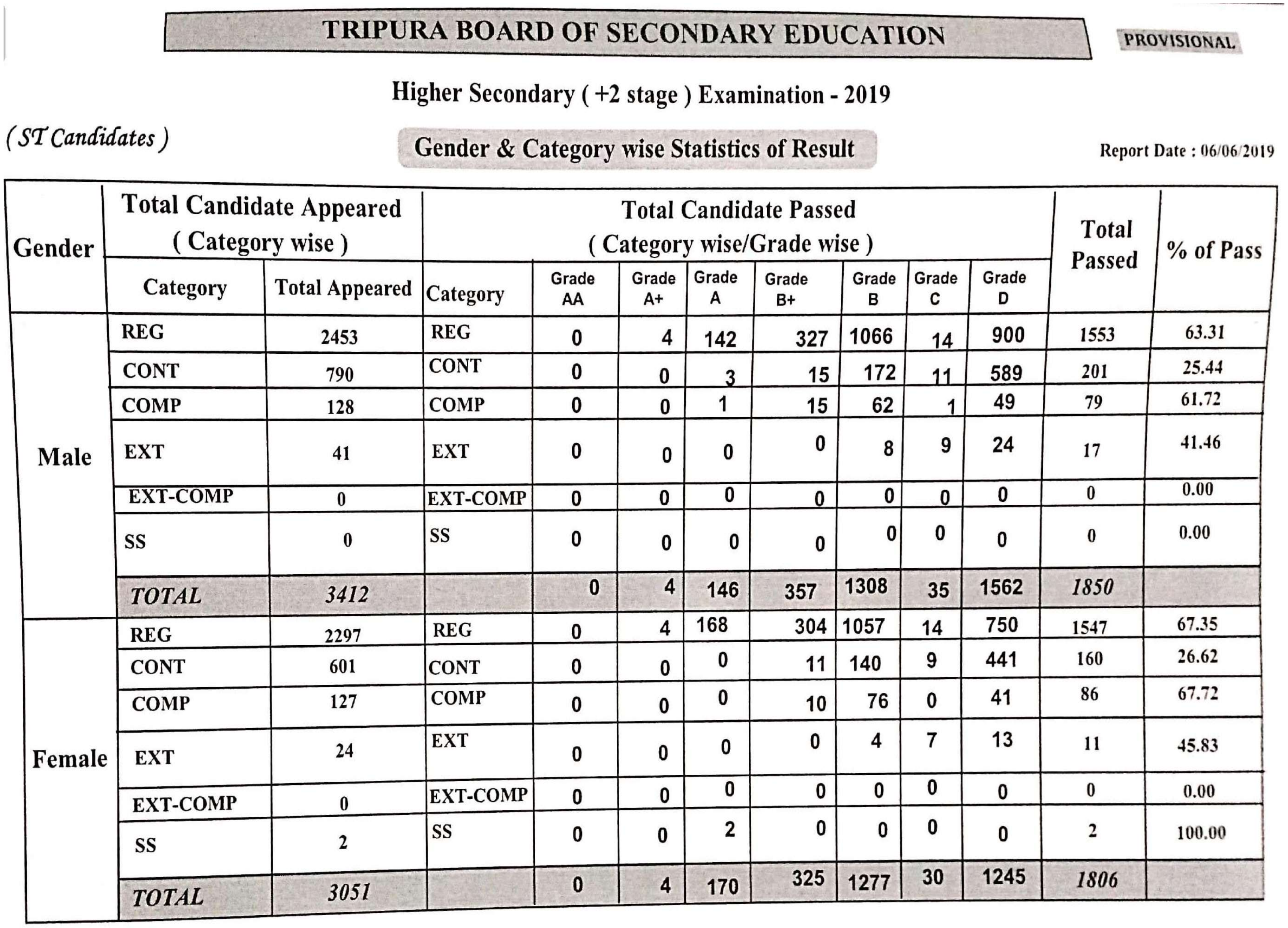
(SC Candidates)

Gender & Category wise Statistics of Result

Report Date : 06/06/20

Gender	Total Candidate Appeared (Category wise)		Total Candidate Passed (Category wise/Grade wise)								Total Passed	% of Pass
	Category	Total Appeared	Category	Grade AA	Grade A+	Grade A	Grade B+	Grade B	Grade C	Grade D		
Male	REG	2383	REG	2	30	453	457	976	15	450	1933	81.12
	CONT	364	CONT	0	0	4	7	96	4	253	111	30.49
	COMP	78	COMP	0	0	0	12	36	1	29	49	62.82
	EXT	90	EXT	0	0	2	8	21	23	36	54	60.00
	EXT-COMP	0	EXT-COMP	0	0	0	0	0	0	0	0	0.00
	SS	6	SS	0	0	2	1	3	0	0	6	100.00
	TOTAL	*2921*		2	30	461	485	1132	43	768	*2153*	
Female	REG	2332	REG	2	33	531	499	899	6	362	1970	84.48
	CONT	202	CONT	0	0	1	9	51	2	139	63	31.19
	COMP	64	COMP	0	0	2	9	36	1	16	48	75.00
	EXT	112	EXT	0	1	10	13	40	24	24	88	78.57
	EXT-COMP	0	EXT-COMP	0	0	0	0	0	0	0	0	0.00
	SS	0	SS	0	0	0	0	0	0	0	0	0.00
	TOTAL	*2710*		2	34	544	531	1026	33	541	*2169*	

HS2019



TRIPURA BOARD OF SECONDARY EDUCATION

PROVISIONAL

Higher Secondary (+2 stage) Examination - 2019

(*ST Candidates*)

Gender & Category wise Statistics of Result

Report Date : 06/06/2019

Gender	Total Candidate Appeared (Category wise)		Total Candidate Passed (Category wise/Grade wise)								Total Passed	% of Pass
	Category	Total Appeared	Category	Grade AA	Grade A+	Grade A	Grade B+	Grade B	Grade C	Grade D		
Male	REG	2453	REG	0	4	142	327	1066	14	900	1553	63.31
	CONT	790	CONT	0	0	3	15	172	11	589	201	25.44
	COMP	128	COMP	0	0	1	15	62	1	49	79	61.72
	EXT	41	EXT	0	0	0	0	8	9	24	17	41.46
	EXT-COMP	0	EXT-COMP	0	0	0	0	0	0	0	0	0.00
	SS	0	SS	0	0	0	0	0	0	0	0	0.00
	TOTAL	*3412*		0	4	146	357	1308	35	1562	*1850*	
Female	REG	2297	REG	0	4	168	304	1057	14	750	1547	67.35
	CONT	601	CONT	0	0	0	11	140	9	441	160	26.62
	COMP	127	COMP	0	0	0	10	76	0	41	86	67.72
	EXT	24	EXT	0	0	0	0	4	7	13	11	45.83
	EXT-COMP	0	EXT-COMP	0	0	0	0	0	0	0	0	0.00
	SS	2	SS	0	0	2	0	0	0	0	2	100.00
	TOTAL	*3051*		0	4	170	325	1277	30	1245	*1806*	

HS 2019

TRIPURA BOARD OF SECONDARY EDUCATION

PROVISIONAL

Higher Secondary (+2 stage) Examination - 2019

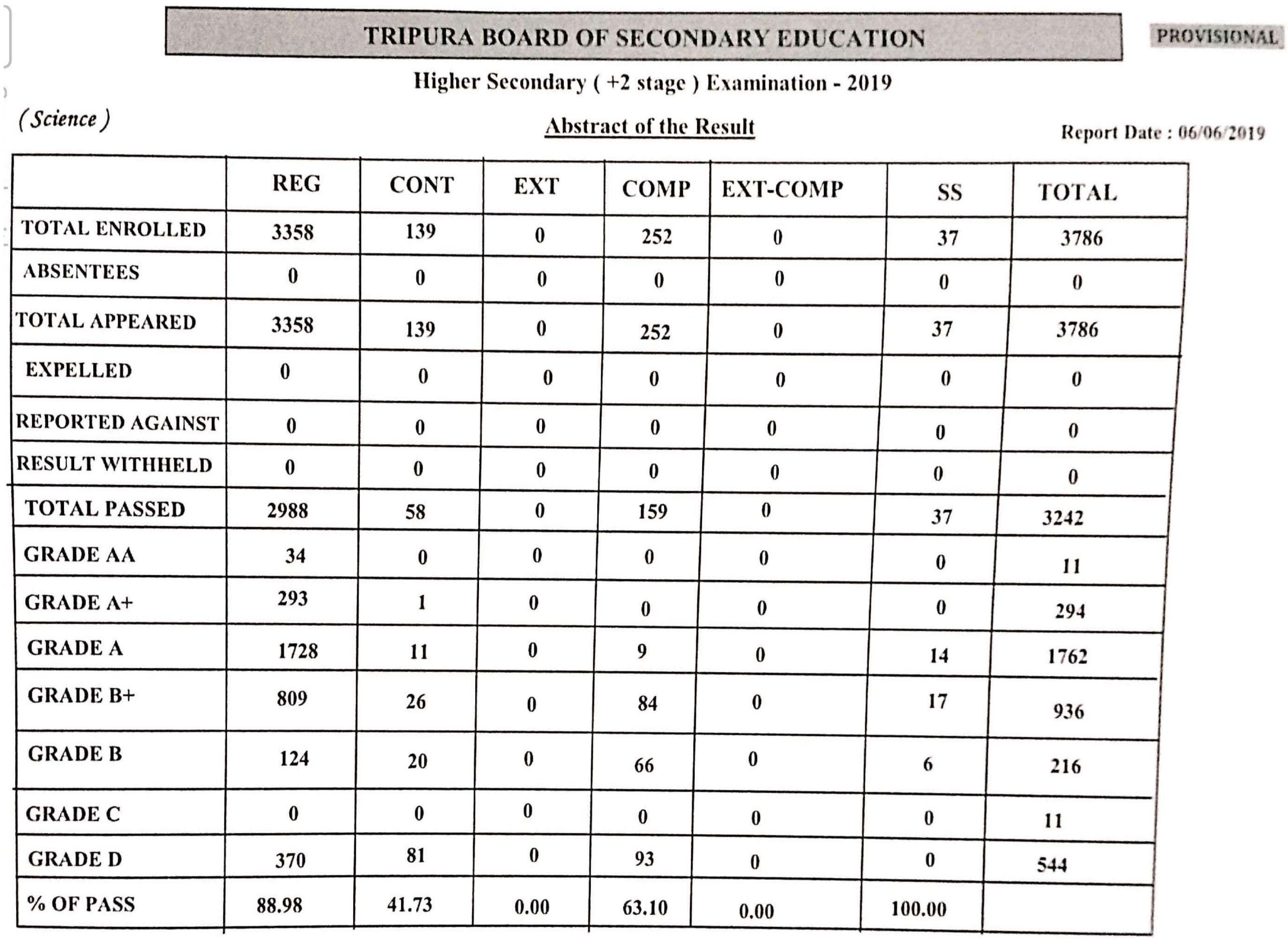
(Humanities)

Abstract of the Result

Report Date : 06/06/2019

	REG	CONT	EXT	COMP	EXT-COMP	SS	TOTAL
TOTAL ENROLLED	18394	2835	751	470	0	1	22451
ABSENTEES	0	0	42	0	0	0	42
TOTAL APPEARED	18394	2835	709	470	0	1	22409
EXPELLED	0	0	0	0	0	0	0
REPORTED AGAINST	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	0	0	0	0
TOTAL PASSED	14540	773	479	298	0	1	16091
GRADE AA	3	0	0	0	0	0	3
GRADE A+	116	1	1	0	0	0	118
GRADE A	2699	6	44	0	0	0	2749
GRADE B+	3303	36	69	11	0	0	3419
GRADE B	8315	689	217	282	0	1	9504
GRADE C	104	41	148	5	0	0	298
GRADE D	3854	2062	272	172	0	0	6360
% OF PASS	79.05	27.27	67.56	63.40	0.00	100.00	

HS 2019



PROVISIONAL

TRIPURA BOARD OF SECONDARY EDUCATION

Higher Secondary (+2 stage) Examination - 2019

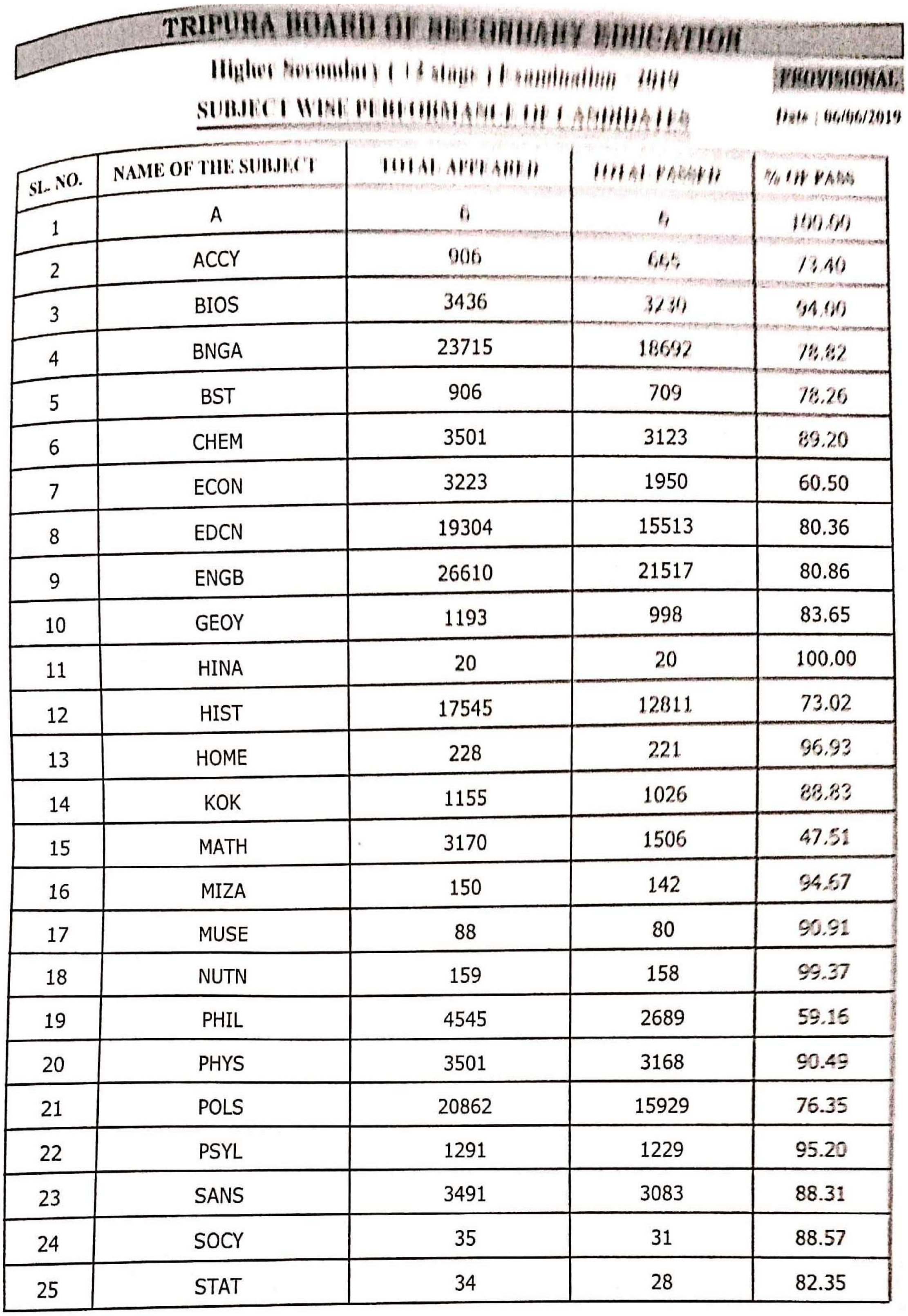
(Science)

Abstract of the Result

Report Date : 06/06/2019

	REG	CONT	EXT	COMP	EXT-COMP	SS	TOTAL
TOTAL ENROLLED	3358	139	0	252	0	37	3786
ABSENTEES	0	0	0	0	0	0	0
TOTAL APPEARED	3358	139	0	252	0	37	3786
EXPELLED	0	0	0	0	0	0	0
REPORTED AGAINST	0	0	0	0	0	0	0
RESULT WITHHELD	0	0	0	0	0	0	0
TOTAL PASSED	2988	58	0	159	0	37	3242
GRADE AA	34	0	0	0	0	0	11
GRADE A+	293	1	0	0	0	0	294
GRADE A	1728	11	0	9	0	14	1762
GRADE B+	809	26	0	84	0	17	936
GRADE B	124	20	0	66	0	6	216
GRADE C	0	0	0	0	0	0	11
GRADE D	370	81	0	93	0	0	544
% OF PASS	88.98	41.73	0.00	63.10	0.00	100.00	

HS 2019



TRIPURA BOARD OF SECONDARY EDUCATION

Higher Secondary (+2 stage) Examination 2019

PROVISIONAL

SUBJECT WISE PERFORMANCE OF CANDIDATES

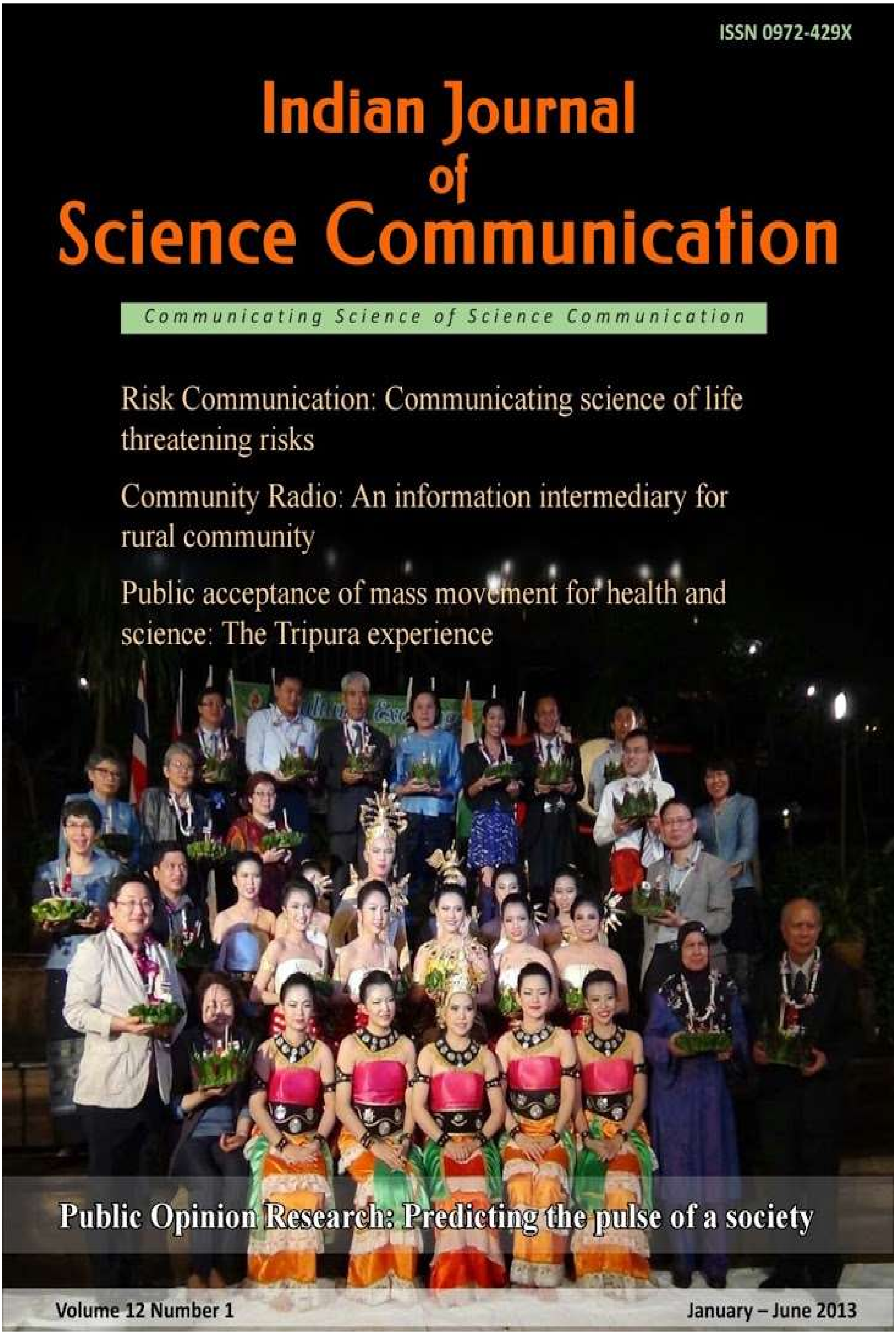
Date : 06/06/2019

SL. NO.	NAME OF THE SUBJECT	TOTAL APPEARED	TOTAL PASSED	% OF PASS
1	A	6	6	100.00
2	ACCY	906	665	73.40
3	BIOS	3436	3230	94.00
4	BNGA	23715	18692	78.82
5	BST	906	709	78.26
6	CHEM	3501	3123	89.20
7	ECON	3223	1950	60.50
8	EDCN	19304	15513	80.36
9	ENGB	26610	21517	80.86
10	GEOY	1193	998	83.65
11	HINA	20	20	100.00
12	HIST	17545	12811	73.02
13	HOME	228	221	96.93
14	KOK	1155	1026	88.83
15	MATH	3170	1506	47.51
16	MIZA	150	142	94.67
17	MUSE	88	80	90.91
18	NUTN	159	158	99.37
19	PHIL	4545	2689	59.16
20	PHYS	3501	3168	90.49
21	POLS	20862	15929	76.35
22	PSYL	1291	1229	95.20
23	SANS	3491	3083	88.31
24	SOCY	35	31	88.57
25	STAT	34	28	82.35

HS 2019

REFERENCE in APPENDIX

1. ***IJSC 2013***
2. ***NCME OF NCERT 2018***
3. ***VIGYANIKA IISF 2019***
4. ***NS NCERT of RIE MYSURU 2020***
5. ***ISCA – IGNOU National Seminar 2020***



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Communicating Science of Science Communication

Risk Communication: Communicating science of life threatening risks

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Public acceptance of mass movement for health and science: The Tripura experience

Public Opinion Research: Predicting the pulse of a society

Volume 12 Number 1

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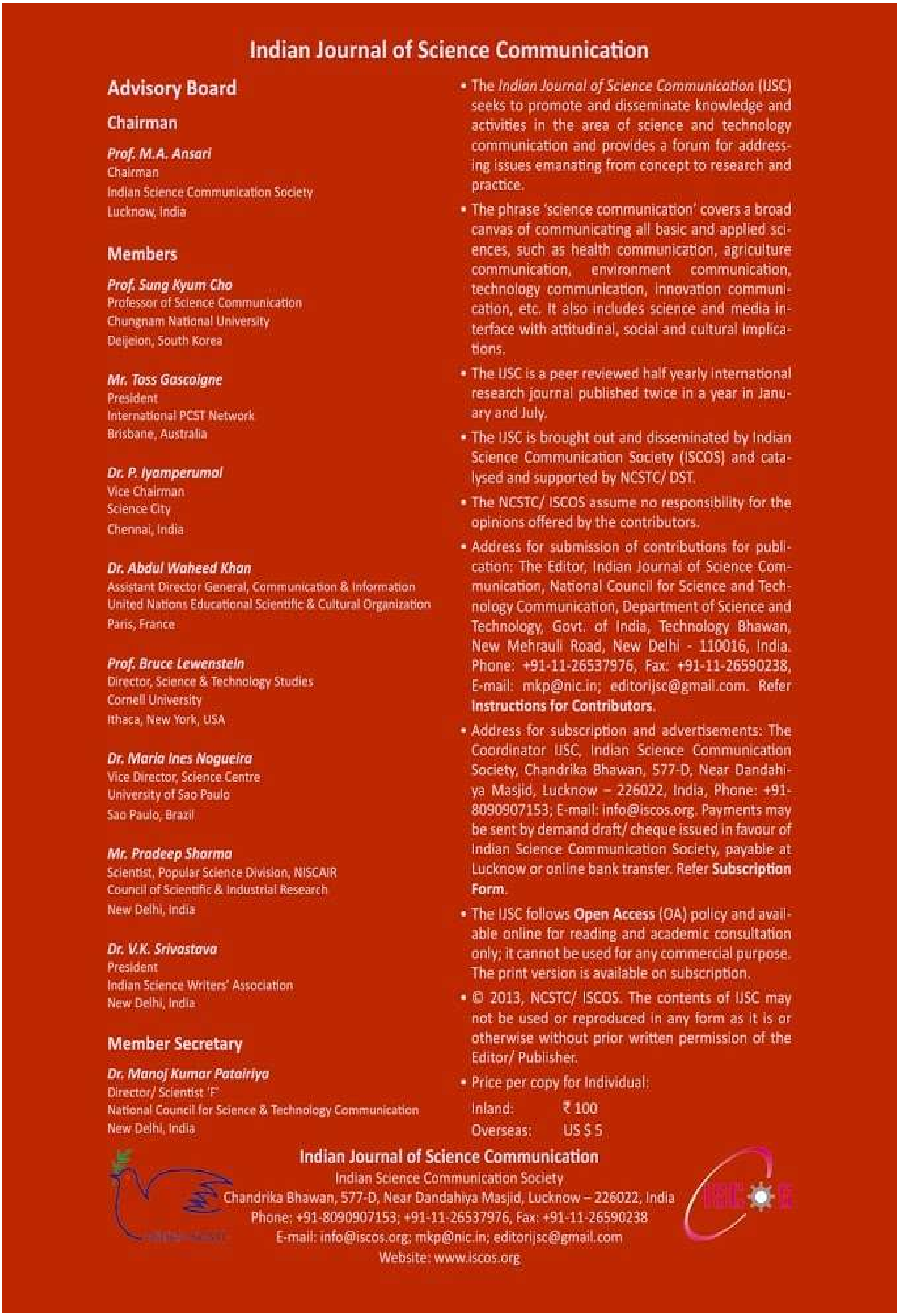

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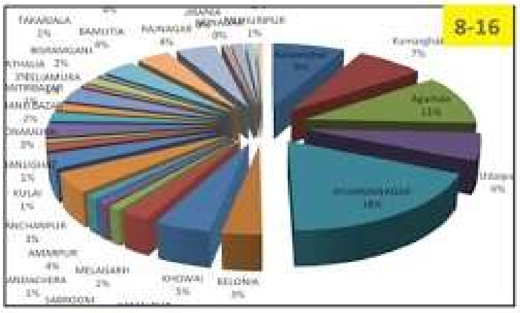

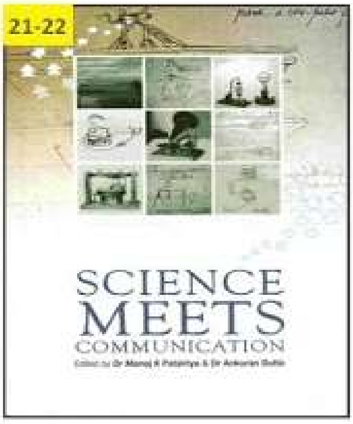

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RESEARCH PAPER

Public acceptance of mass movement for health and science: The Tripura experience

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Science communication and health education are the master tools to generate awareness and prevent and eradicate deadly diseases for the well beings of a nation. Communication strategies on Hepatitis and the follow up feedback to eradicate Hepatitis in Tripura state have proved the success of the principle thoughts of science communication. Hepatitis B is an infectious and complicated fatal disease and needs significant attention of the society for its prevention. It has become a burning concern over the period for public health. Besides awareness, vaccination could be another way to prevent such public health crisis. A successful health education and communication campaign in the region had an impact. Interested people of the state, who have taken the HB vaccination, confirmed the success of implementation of the scientific awareness and science dissemination organized by the Govt. of Tripura through a PPP model. Tripura is a small state of North East India, where Hepatitis B susceptibility is high and needs to tackle through health education and science dissemination amongst a mix population consisting over 19 tribes and Bengalese besides socio-economic and cultural differences. The experiment projects the public acceptance of science communication and mass movement for up-gradation of living style. The mass movement through three tier networking may be categorized from planner, volunteer, and to implementer. The Tripura HB vaccination project establishes that the science communication leads to change the life of people and health education transforms the people's opinion to accept science based solutions.

Keywords: Hepatitis B vaccine, Science and health communication, Public acceptance, Health campaign

Introduction

Tripura has shown remarkable development in every sphere of life. After the transformation from royal to a democratic state, Tripura conquers the high status in development since its merger with the Republic of India in 1949. Tripura now started to twinkle with the mark achievements in various socio-scientific parameters. Tripura is the state where people are literate by above 80%. Tripura now is the only state, where almost 100 percent voters cast their votes in elections. Health status is subject to understanding of health education and willingness to the wellbeing. The high valued health education and health science communication converts a simple society into a better health conscious one, without a fail and also builds a confident populace for future. Health education and science communication sector offers a feedback to be analyzed aftermath any health education or science communication activity to record people's reaction.

Tripura is a state, where the government through a PPP model initiated Tripura HB vaccination project to vaccinate people with Hepatitis B vaccine in a mode of mass health and science movement by 20% population, which has been possible for sustained health education and science communication process. Though, it was difficult to convince people in the beginning, but slowly they started believing in the science process. It has become evident that now people are aware to the rules of wellbeing. Implementation of the campaign got value for the same reason and further such consciousness ensures prompt walk of the people from their homes to clinics.

Methodology

Networking is the vital character and factor to any mass health science movement to ensure the success. To utilize the human power property, the networking in two different modes is the basic principle for success of any mass movement. Networking system, which has been developed and discussed here towards conducting the movement, may be classified as follows:

1. Intra-personal networks

To organize the mass movement the collective work of a group of organizers, resource persons and coordinators is essential. The depth of relationship and coordination between the organizers ensures the quantum of the success of a programme.

i. Intra personal network strengthens the coordination to organize mass movement through which science can be disseminated and can be accepted by the public.
ii. The network plans the programme in a better way to resolve a concerted decisive opinion, which became a better output from a broad group discussion.
iii. The relationship made under the system may be between different types of personalities of experts having different kind of expertise.
iv. Success of the programme depends on better activity and coordination.
v. Faces are known to each other as maximum as possible.
vi. The group may be divided into different categories, where each category may have specific work or activity.
vii. The duty, dignity and job profile of members are important to conduct the specific activity and it should consist of a core team of specialists.

2. Inter personal network relationship

Mass movement has a great responsibility to the society, which majorly needs to reach the masses. Preparation of the information dissemination through single window system is the basic principle to the root networking for the mass movement to the society. This better root networking confirms the proper field work among the society and masses or target audience to implement the awareness projects. Involvement of these groups ensures the success of a mass movement. Hence, the inter personal network is the middle order which links and relates the organizers to the masses, i.e. the plans or inputs and the success or outputs.

i. The network should include the persons, who have better ability to communicate social and scientific matters to the target masses.
ii. Networking people may understand the masses and their needs, they may plan to disseminate science in a way, so that it is understandable and finally acceptable to the concerned target group.
iii. The public acceptance is the basic and major factor here on which the success depends.
iv. Selection of the host lecturer, who is the resource person, to communicate with the target masses, should be a well-known and socially honourable person, so that the person may attract public acceptance.
v. The group will act as field staff to conduct the

programme and work in the field.

3. Characteristics of masses

Mass movement in the health sector and related science communication is dependable to the masses. Such programmes have a hidden concept of "by the people, of the people, and for the people", which made the programme public dependent. The advantage characteristic of the Tripuraian is literacy and aggressive interest towards wellbeing and livelihood, which transform it into a willing society to absorb the public interest factors from a mass movement. The group itself acts as a grass root level networking structure to manage manpower to disseminate the scientific thoughts as a part of the mass movement; and shaping networking structure as three tier system.

Challenges for a mass movement

Mass movement in Tripura is a challenge because of the positional placement of the state both characteristically and geo-graphically different from every aspect. Communication is a prime factor to achieve satisfactory result in any mass movement. The communication status of Tripura may not be comparable to any other state. The Himalayan range extends through the states of North East India; hence Tripura has maximum hills against its tiny plains. So the land locked Tripura has limited scope of communication through road.

Challenges	
A	Road connectivity
B	Organizing the population
C	Arrangement of programme
D	Language of interaction
E	Date and time convenient
F	Highlighting public interest
G	Personal benefit of the individual
H	Geo barriers

Road connectivity: The state is a hilly area; hence the road communication is not proper to reach the remote villages. The transit needs maximum time, which may be one of the reasons to disturb the normal life style apart from disturbing the movement to reach the target people.

Geo barriers: Tripura has mainly (14-18) hills with their series spread across the state. It disturbs the road communication and connectivity throughout the state. Apart from the hills, the state has ten rivers. The leading barrier is the land locked position, where the state is surrounded at 3 sides by a neighbouring country Bangladesh, with a narrow linkage at one side only with rest of India, connecting with Assam and Meghalaya.

High the public benefit: Public benefit must be a major factor to be highlighted in the field by the networking volunteers, who are operating in the field with the masses. Highlighting public benefit can attract the minds of people to make a positive opinion. Public benefit is paramount, which ultimately leads to the acceptance of the health awareness programme. Realization of personal benefit focuses on the opinion building to upgrade the life and living status with scientific messages and opinions. In Tripura, which is geographically a disease prone state, the benefits of disease-free life gets value in the minds of the masses.

Techniques and process of mass movement

Dissemination procedure	Targeted mass public group
a) **Group discussion**	Opinion makers family and group heads
b) **Awareness camp**	School institution of groups community level
c) **Short seminar/ lectures**	Leaders of social bodies
d) **Press information/ media**	Masses
e) **Quiz/ competitions**	Interested pupils & guardians
f) **Film show**	Public places at evening / busy hours
g) **Advertisement**	Local publication and press for masses
h) **Announcement**	To inform localities
i) **Messaging**	To educated mobile users
j) **Door to door**	Conducted a survey for information dissemination

The world's first Hepatitis B virus universal vaccination programme for infants was launched in Taiwan in July 1984[5]. Subsequently, since 2007 Iran's Ministry of Health carried out a nationwide HB vaccination programme. In 2009, 177 countries reported that they had included HB vaccination into their national infant immunization programme[3].

The major factor of the social and mass vaccination programme is to provide and to disseminate the health science or the concept of ultimate result of the preventive medicare, which can be realized through proper scientific education.

The mass vaccination or any inject-able prevention of disease is the ultimate feedback of positive concept building, concrete and strong mindset for wellbeing and also guaranteed acceptance of health and social science, which may also be taken forward to the next generation by the educated guardians.

Involve personals: To conduct the designed awareness campaign on health, here various professionals were involved utilizing their potentialities to disseminate science to masses in various ways and in multi-dimensions.

Hepatitis B as a medium for science communication: Hepatitis B is an infections virus with a significant global public health and social problem. 350 million people in the world are chronically infected by the HBV and estimated 2 billion are exposed to virus in the life time[1, 2]. About 78% of global pool of HBV infection is from Asian countries, particularly developing countries in Asia-pacific region. HBV accounts for at least 50% of the chronic Hepatitis cases and 70-85% of Hepato-Cellular Carcinoma in this region.

Overview on Hepatology: Prevention of Hepatitis is of paramount importance. Understanding the disease and its fatality, a vaccine against Hepatitis B has been available since 1982. This vaccine was plasma derived vaccine and was not free from side-effects. In 1987, recombinant DNA technology

Professionals	**Targeted society**	**Mode of science dissemination**	**Impact on society**
Doctors/ health-care providers	Patients	Direct awareness about sufferings and benefits of the programme	The group is small but due to direct and single window dissemination procedure its impact is high
	Relatives of patients	Silently highlighted the severity of the disease and suffering with example/ sample patient	Knowing or understanding the examples of the sufferings, the targeted group accepts the facts of science communication
Journalists	Masses	Utilizing both the potentiality of science writing/ communication and habit of society of reading newspapers/ magazines	Through this process, science may be disseminated to a large group, but the impact is uncertain to judge the feedback properly due to unknowing facts of acceptance of the thoughts
Writers	Educated public	They may build the mind set, concept and confidence of the society to mobilize the society in a positive direction to get better feedback of science communication	The group is small but too intellectual, who may further developed a prefect mind-set group
Political leaders	Masses	They can utilize their own personal and ideological influence to generate public awareness and organize a large group of followers for the motive	The professionals have their own admirers/ followers, who obey the instruction of professionals and they have good network to disseminate the message to each and every one in a short time
Teachers/ professors	Students/ guardians	They can educate the pupils who ultimately upgrade the concept of the next generation, apart from building-up a high impactful awareness amongst guardians and relatives of students	The output of such awareness is high impactful and creates a positive outlook beyond the age barriers.

beccme available and till date this vaccine is in use worldwide. The vaccine has an outstanding record of safety and effectiveness. The vaccine is 95% effective in preventing HBV infection and its chronic consequences. In 1992, World Health Assembly passed a resolution to recommend global vaccination against Hepatitis B[3].

Mass vaccination programme ensures well-being along with good health and safety. It also indicates an increased health awareness and belief in science concepts. Mass vaccination programme against Hepatitis B has not been implemented by many countries, though it is considered that high vaccination levels in the population are necessary to decrease the prevalence of disease[4].

The Tripura experiment

The Government of Tripura through Department of Health joined hands with Hepatitis Foundation of Tripura to plan a mass vaccination programme with effective impact and mass health awareness. The team, which consists of social workers, professionals, communicators, government authorities, public servants, and students, healthcare providers, has prepared a plan to make people aware about health science aspects of deadly disease, simultaneously running number of vaccination clines. The preparatory phase of the programme began in 2002. Since 2003, the team started running vaccination clinic at capital city Agartala to immunize interested people and families with Hepatitis B vaccine as a proper medical procedure.

Within a short span of time, the clinic has been transformed into a relievable medical counseling center beyond a immunization centre only, where people started visiting in search of answers to their questions about diseases and wellbeing related health science issues. The team realized the awareness factor and to utilize this formula, the team has established 32 counseling centers-cum-vaccination clinics throughout the state at the government hospi-

Programme	**Coordinator**	**Targeted group**	**Impact**
Community awareness	Community leaders	Masses of a society or village	It creates the curiosity and also satisfies it. It should be in favor of society and build the concert concept of a large size masses
Awareness for professionals	Association portfolio stalwarts, HODs	Professionals	It builds mindset as well as concept and supports the programme. Participants may disseminate the scientific message to the society or community. So that they may consider as the middle part of the networking relationship, who are forwarding the message to the society. They perform as a second step forward to the organizers and between the organizers and masses
Cultural activity	Season's favorite personalities	Masses along with singers/ artistes	They may disseminate the scientific views in a simple way, which may be attractive and acceptable to the public, artistes and informed citizens, through the awareness process
Press\ media coverage	Largest/ larger circulated mass media	Educate masses, administrators and press personnel	Such coverage helps in documentation of the programme, inform the educated public and to build up the confidence of administrators for the programme and high value mindset and acceptance amongst administrators. Press coverage has broad impact and gets maximum millage
Books	Premium publishers, book sellers	Bookworm people	Book has taken in the account as a valued medium of communication and for circulation
School based awareness campaign	School teachers, academicians or coaches, NSS activists	Students with teachers and guardians	The talk of a teacher or an academician gets maximum value in the minds of students and guardians and also confirms the guaranteed output
Hepatitis B immunization clinic and counseling	Vaccine	People interested to vaccination and responding to the science communication	It's a direct communication between the vaccine beneficiaries and organizers.

tals and healthcare institutions, serving as community awareness hubs. Initially, the team has focused on efforts to develop a health conscious concept for the society, especially public acceptance of inject-able immunization.

To disseminate the medical science to the people of Tripura, the team has planed various modes and means under the programme to make people aware to spread acceptance to generate values of health education and increased vaccination turnaround at the centres. The persons, who are taking the vaccination, have been recognized as a group, who understands science of vaccine in a better way. Before that there was no awareness generation on health and hepatitis management in the state in a proper scientific way.

Observations and analysis

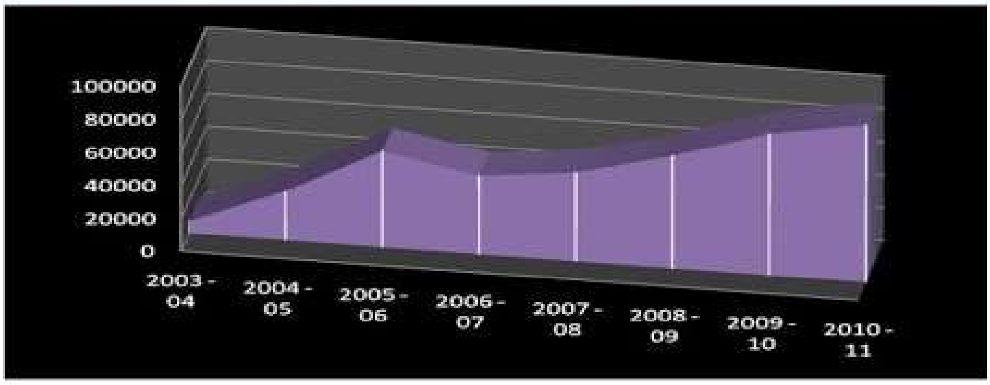
Through the movement to prevent the prevalence of HBV in the state was then getting good response from people across the state, still something was needed to take this quest against HB a step ahead. The team planed to further strengthen the programme through its 32 permanent HB clinics along with 150 temporary HB clinics especially and only to provide facility at the doorsteps of the people to get better response. It worked very well and got a remarkable response. Though, the team partly failed to provide the facility to all who wanted to avail of the facility of vaccination at their doorstep. The team again planed a mega project next year in 2010-11 onwards with a larger public demand created by a workable communication strategy. The programme result reveals that science communication efforts have renewed the people's desire to remain healthy and live long with a dose of scientific knowledge and mood.

Studying samples: Vaccination is in uprising mode since 2003. In 2005-2006 it touched a very satisfactory level. However, 2006-08 observed a poor growth, but that has been recovered by 2009-10 at the end of the decade and touched the ever highest peak which is 21.37% of the total vaccination response in a single year only. The year by year cumulative analysis of response has been analyzed as follows:

Cumulative increase of vaccination and impact of science communication: Assessment of regular clinic data (2003-2011)

Year	Cumulative year wise increase	%
2004-05 over 2003-04	22480	0.030419
2005-06 over 2004-05	28311	0.03831
2006-07 over 2005-06	-10473	-0.01417

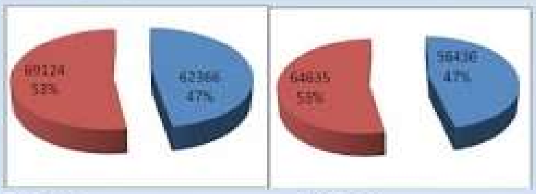
Rising status of gatherings of aware population regularly at Sunday Hepatitis Clinics[6]



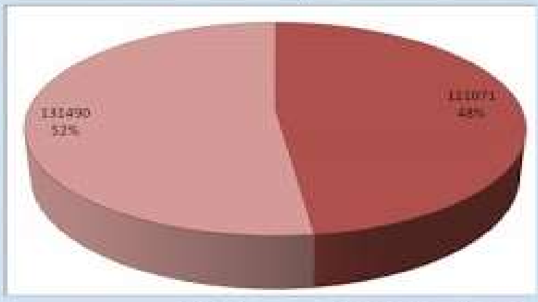
Years	2003-04	2004 -05	2005 -06	2006 -07	2007 -08	2008 -09	2009 -10	2010 -11	Total
Vaccinated Population	7390	29870	58181	47708	53804	68146	85747	95404	446250

2007-08 over 2006-07	6096	0.008249
2008-09 over 2007-08	14342	0.019407
2009-10 over 2008-09	17601	0.023817
2010-11 over 2009-10	9657	0.013068

Acceptance of science communication and vaccination in a single day[6]



2010-11 **2009-10**



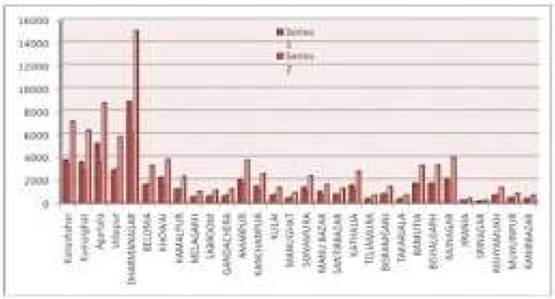
Projects	**Children (up to 10 yrs)**	**Adult (10 yrs +)**	**Total**
1ST Hepatitis B Eradication Programme: 2009-2010	**56436**	**64635**	**121071**
2nd Hepatitis B Eradication Programme: 2010-2011	**62366**	**69124**	**131490**
Grand Total			**252561**

Analyzing samples: Hepatitis B eradication programme had an impact assessment of understanding the science behind it practically. In a single day programme across the state, with permanent 32 HB clinics and 150 temporary special programmes oriented clinics, the vaccination was done for the people who strengthened their minds for inject-able vaccination. Three doses on three different dates based programme of last two years, since 2009-10, confirms that the people are responding to science and health communication. The 2010-11 outcomes were too higher than that of the last year 2009-10. But the child and adult ratio of vaccination for both the years is almost same, which confirms that the total family vaccination has taken place due to family package based science communication methodology.

1st Hepatitis B eradication programme 2009-2010: First information based result[7]

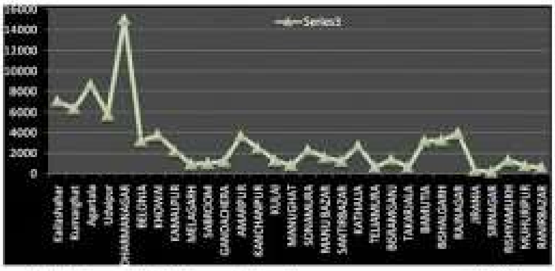
No.	**HFT Branch**	**Adult**	**Child**	**Total**
1	Kailashahar	3767	3326	7093
2	Kumarghat	3560	2782	6342
3	Agartala	5168	3523	8691
4	Udaipur	2812	2946	5758
5	Dharmanagar	8835	6171	15006
6	Belonia	1576	1644	3220
7	Khowai	2229	1558	3787
8	Kamalpur	1179	1103	2282
9	Melagarh	502	465	967
10	Subroom	544	520	1064
11	Gandachera	544	660	1204
12	Amarpur	2061	1647	3708
13	Kanchanpur	1470	1038	2508
14	Kulai	637	710	1347
15	Manughat	373	487	860
16	Sonamura	1354	963	2317
17	Manu bazar	963	635	1598
18	Santirbazar	727	528	1255
19	Kathalia	1536	1182	2718
20	Teliamura	335	326	661
21	Bisramganj	751	671	1422
22	Takarjala	307	351	658
23	Bamutia	1715	1521	3236
24	Bishalgarh	1720	1565	3285
25	Rajnagar	2112	1832	3944
26	Jirania	229	130	359
27	Srinagar	123	86	209
28	Rishyamukh	629	695	1324
29	Muhuripur	431	357	788
30	Ranirbazar	343	308	651
State total		48532	39730	88262

Examining samples: The primary status of HBEP 2009-10 has been published with details so immediately [7]. The status confirms that the vaccination to the children has been given maximum priority by the people to whom science of vaccination was communicated. It also reveals that the health consciousness for the children is higher as compared to those of adults. For instance, in any health issue, if we are able to relate the same to the child health, then it may be easier to motivate the masses at large. Parents are generally too sensitive to their children's health.

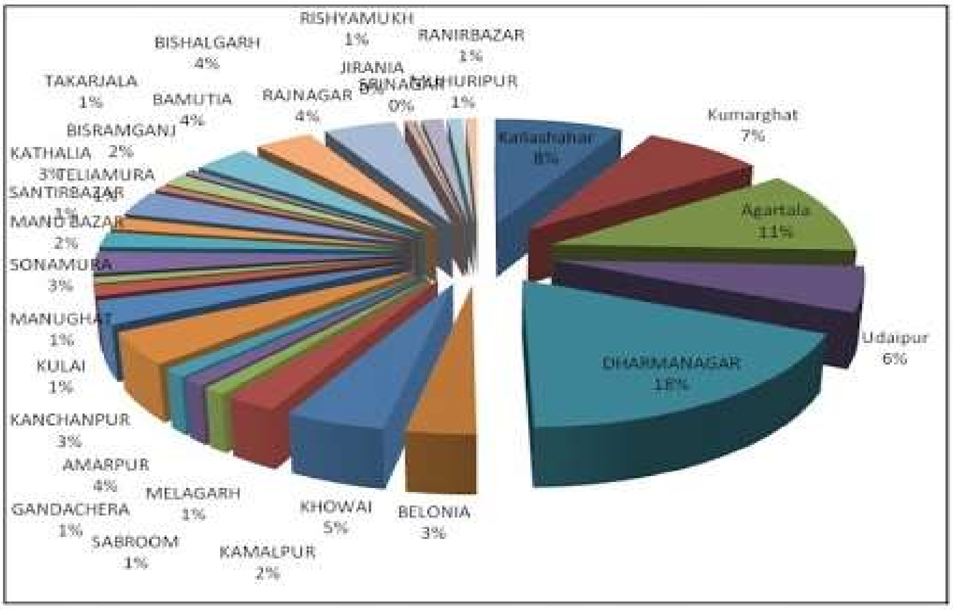


1st Hepatitis B eradication programme 2009-2010: Branch wise child and adult vaccination

Scrutinizing samples: Dharmanagar, the only area of the state attached to the rest of India showed the maximum response to vaccination aftermath of science communication. Four areas including Agartala have shown high acceptance of science communication on Hepatitis management. Rest of the 10 areas is moderately positioned. 15 spots were recognized for poor communication of science, as the number of responders remained marginal, which indicates that communication process across the state succeeded by 50% only at 15 branches only out of 30. The poorly respondent area has also been detected as Srinagar, but child vaccination response was higher to the adult vaccination in this area.



1st Hepatitis Bb eradication programme 2009-2010: Branch wise public response



1st HBEP 2009-2010: Area wise contribution percentage of public response

Investigating samples: The public response to science and health communication considering the percentage of feedback of vaccination as stated above, is higher at the areas linked to the highways and capital, i.e. Agartala, Dharmanagar, Kumarghat, and Udaipur, etc. The areas like Kailashahar are little out of main track, but the District town area proved its active participation in the response to the HB management campaign. Other areas are just maintaining their placement on the chart with a negligible response, due to several challenges and field factors.

Scope and limitations

Vaccinated persons are recognizing as a group that understands the value of science communication, more than the group of people, who have lack of confidence or fear to the vaccination due to painful injection system. Hence, science communication scores more than it was originally imagined for such a mass health awareness movement.

Health education and science communication have prepared the people for vaccination, where own values and confidence building capability had a significant role. Due to these reasons and through a complex methodology, huge number of persons have taken the vaccination and followed the path from awareness to determination and finally moving towards a HBV free future. The clinics, besides vaccination, have been able to recognize the might of public engagement with science and imparted better understanding of health science to visitors in a methodical manner indeed.

Conclusions

1. 20% vaccination against 3.65 million mass population of Tripura is possible due to better implementation of science communication and awareness programmes across the state and the same model may be adopted for betterment of the other states.
2. Everyone wants to update his lifestyle. Such physiological feelings remain high in the society and it's the hidden cause behind willingness for wellbeing and upliftment of lifestyle.
3. People of Tripura are highly interested to understand health science of wellbeing and diseases.
4. Health education and science communication are the prime tools to update the masses. It also strengthens the confidence of people to prevent and combat diseases.
5. More science communication efforts ensure more value addition to the society.
6. Science communication has basic and effective role to change the mindset of public as a master tool to improve general health index of the nation.

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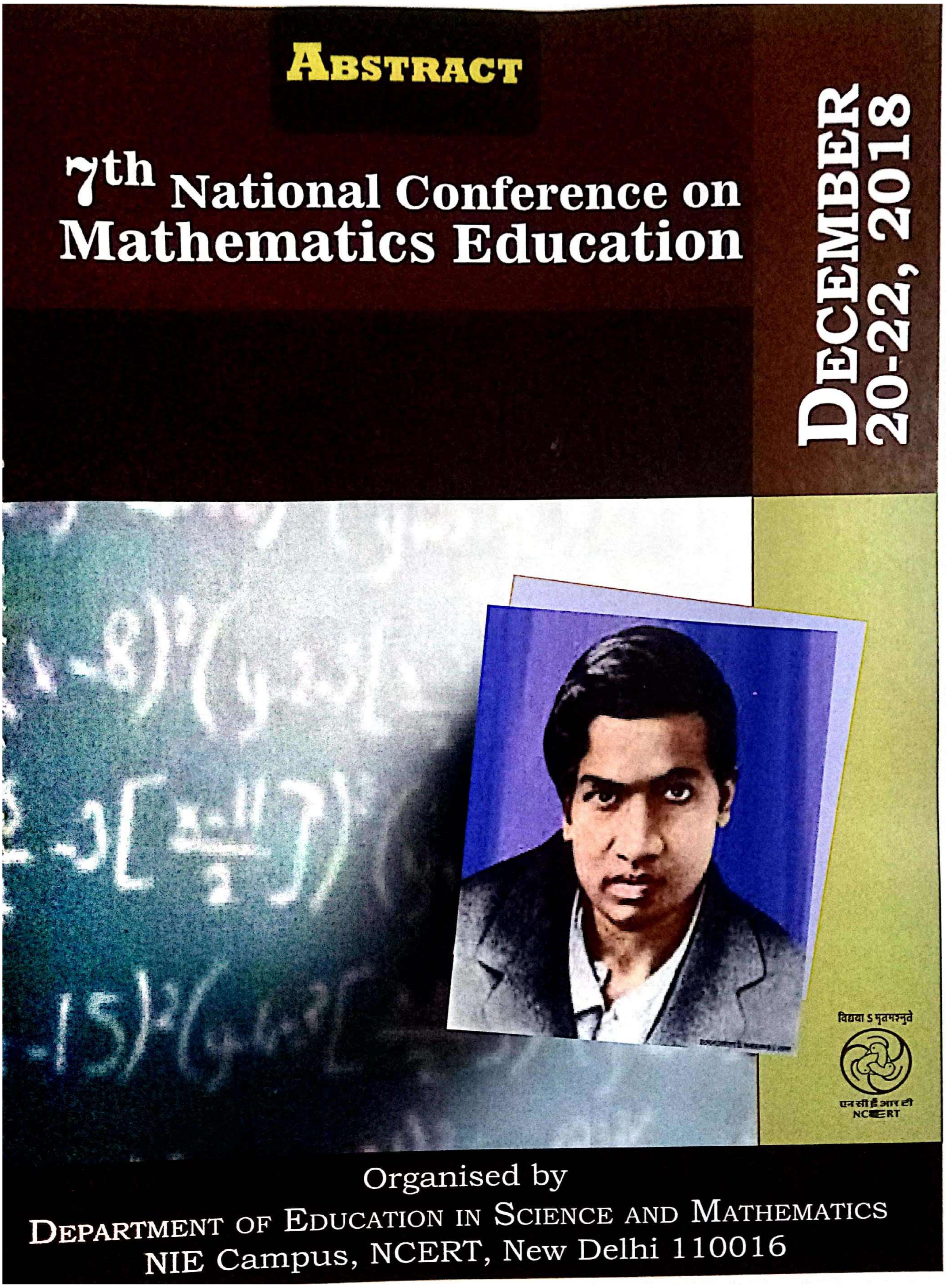

ABSTRACT

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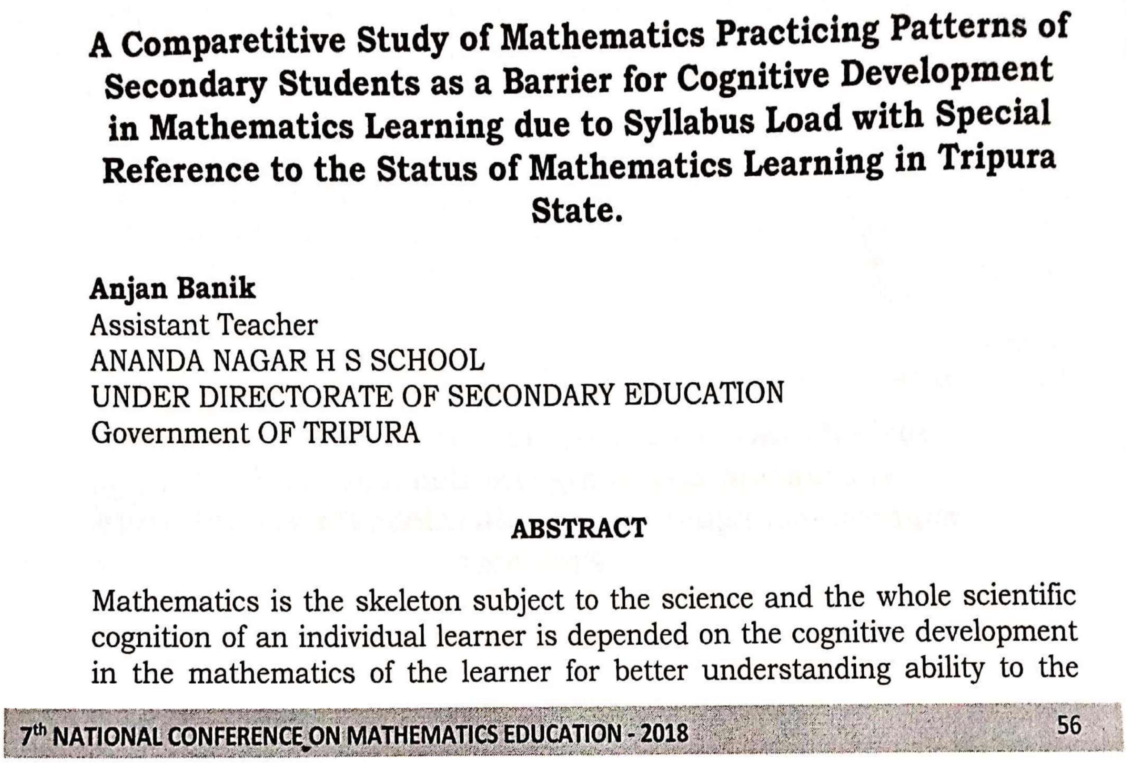

A Comparetitive Study of Mathematics Practicing Patterns of Secondary Students as a Barrier for Cognitive Development in Mathematics Learning due to Syllabus Load with Special Reference to the Status of Mathematics Learning in Tripura State.

Anjan Banik
Assistant Teacher
ANANDA NAGAR H S SCHOOL
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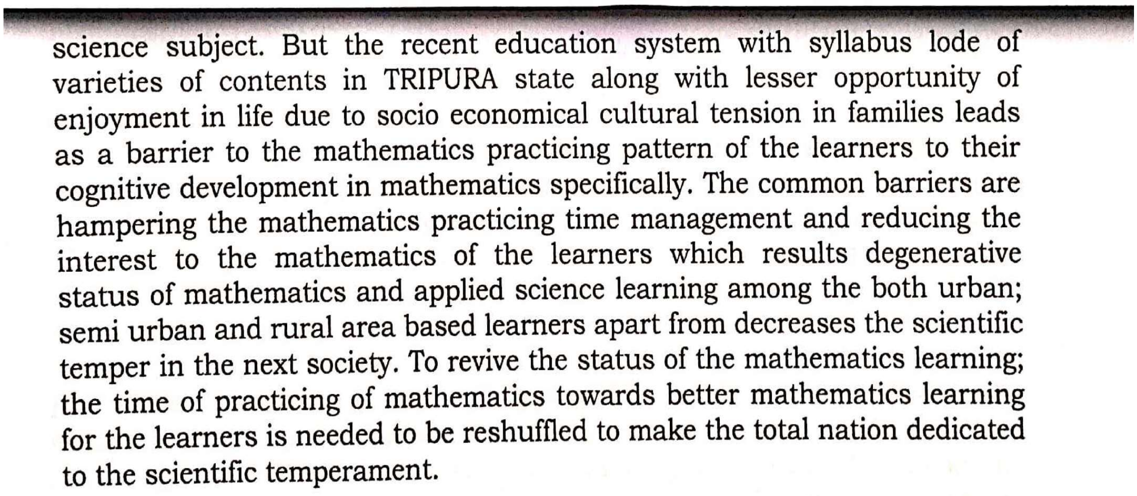
ABSTRACT

Mathematics is the skeleton subject to the science and the whole scientific cognition of an individual learner is depended on the cognitive development in the mathematics of the learner for better understanding ability to the science subject. But the recent education system with syllabus lode of varieties of contents in TRIPURA state along with lesser opportunity of enjoyment in life due to socio economical cultural tension in families leads as a barrier to the mathematics practicing pattern of the learners to their cognitive development in mathematics specifically. The common barriers are hampering the mathematics practicing time management and reducing the interest to the mathematics of the learners which results degenerative status of mathematics and applied science learning among the both urban; semi urban and rural area based learners apart from decreases the scientific temper in the next society. To revive the status of the mathematics learning; the time of practicing of mathematics towards better mathematics learning for the learners is needed to be reshuffled to make the total nation dedicated to the scientific temperament.



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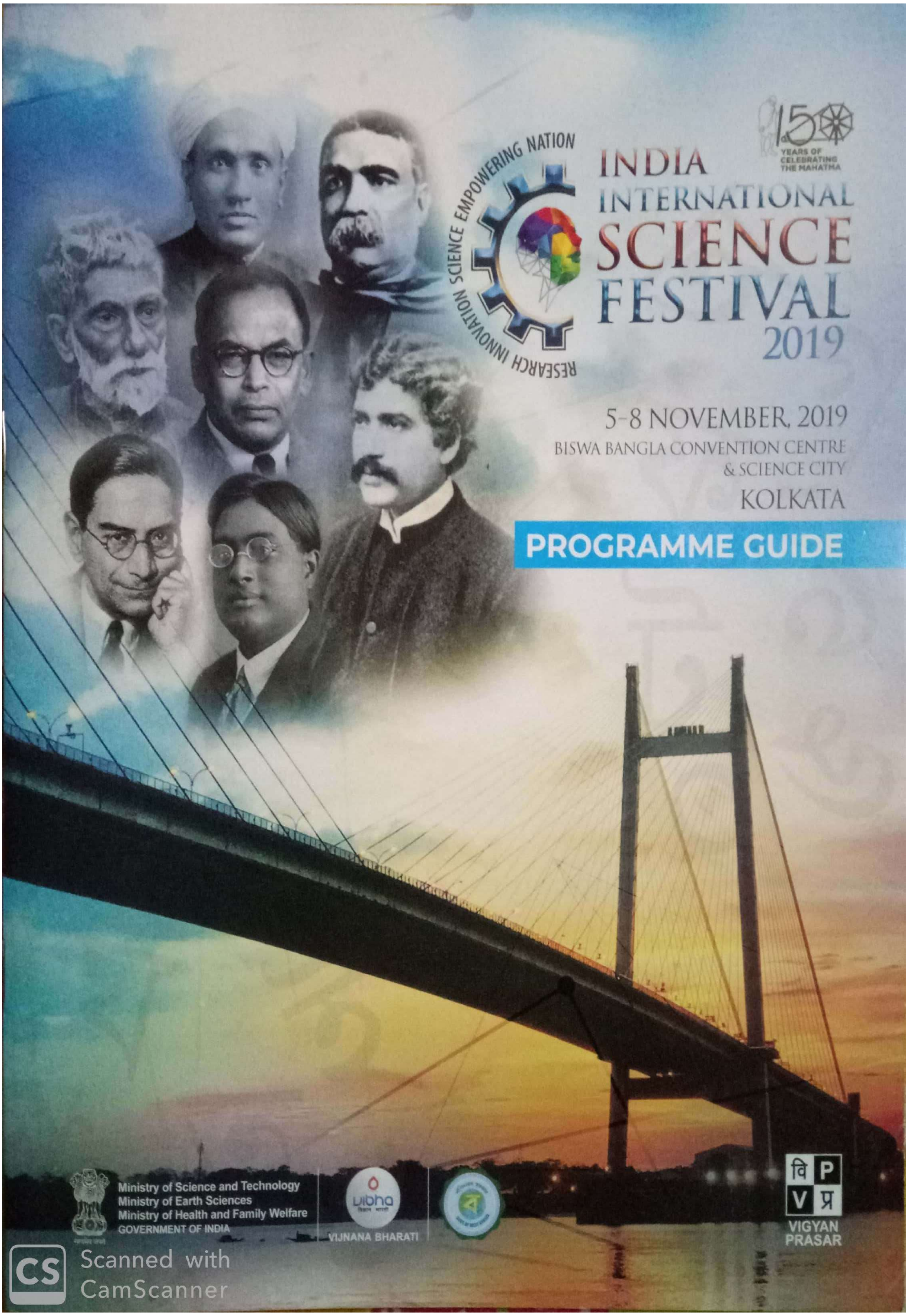

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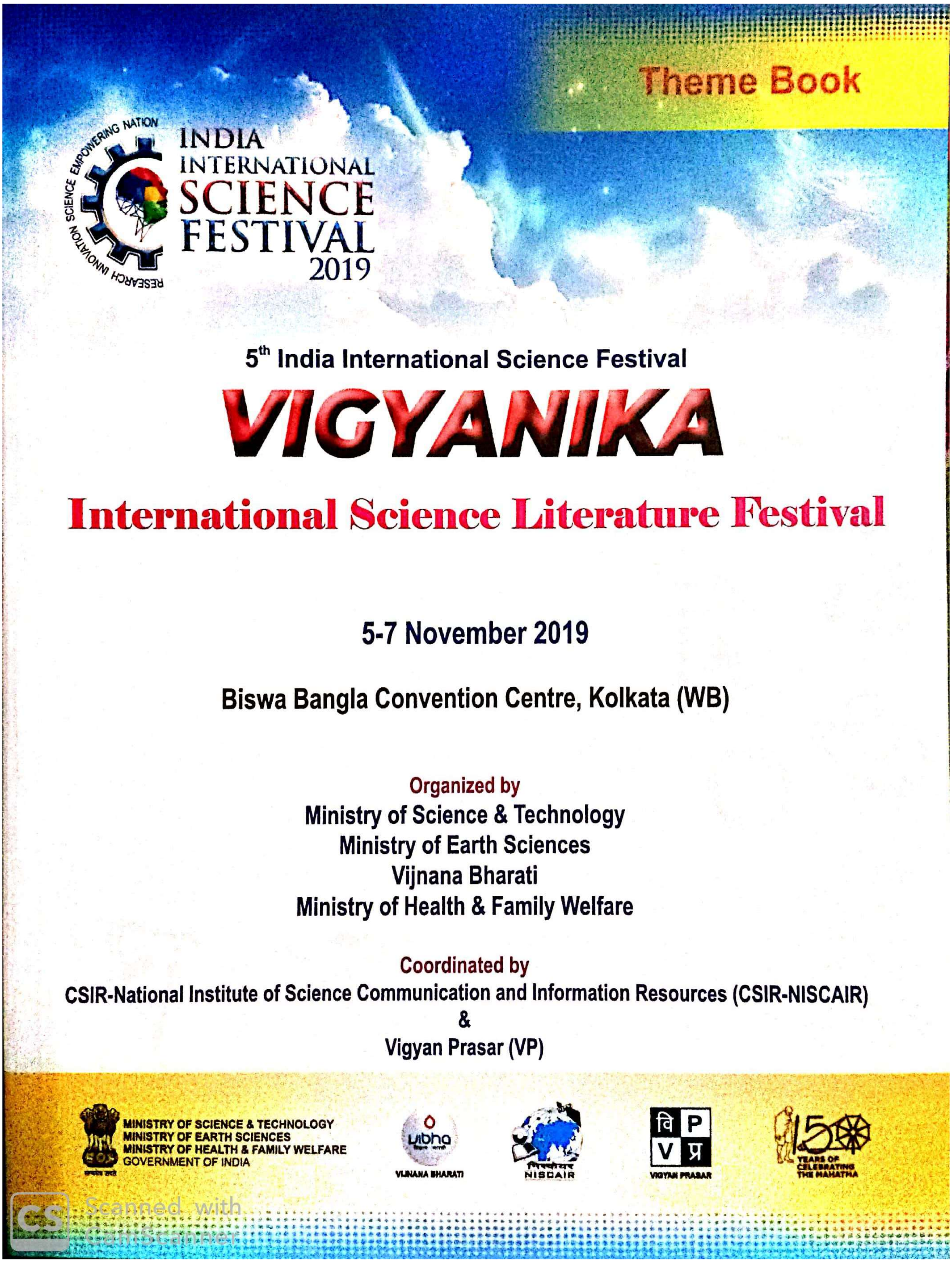

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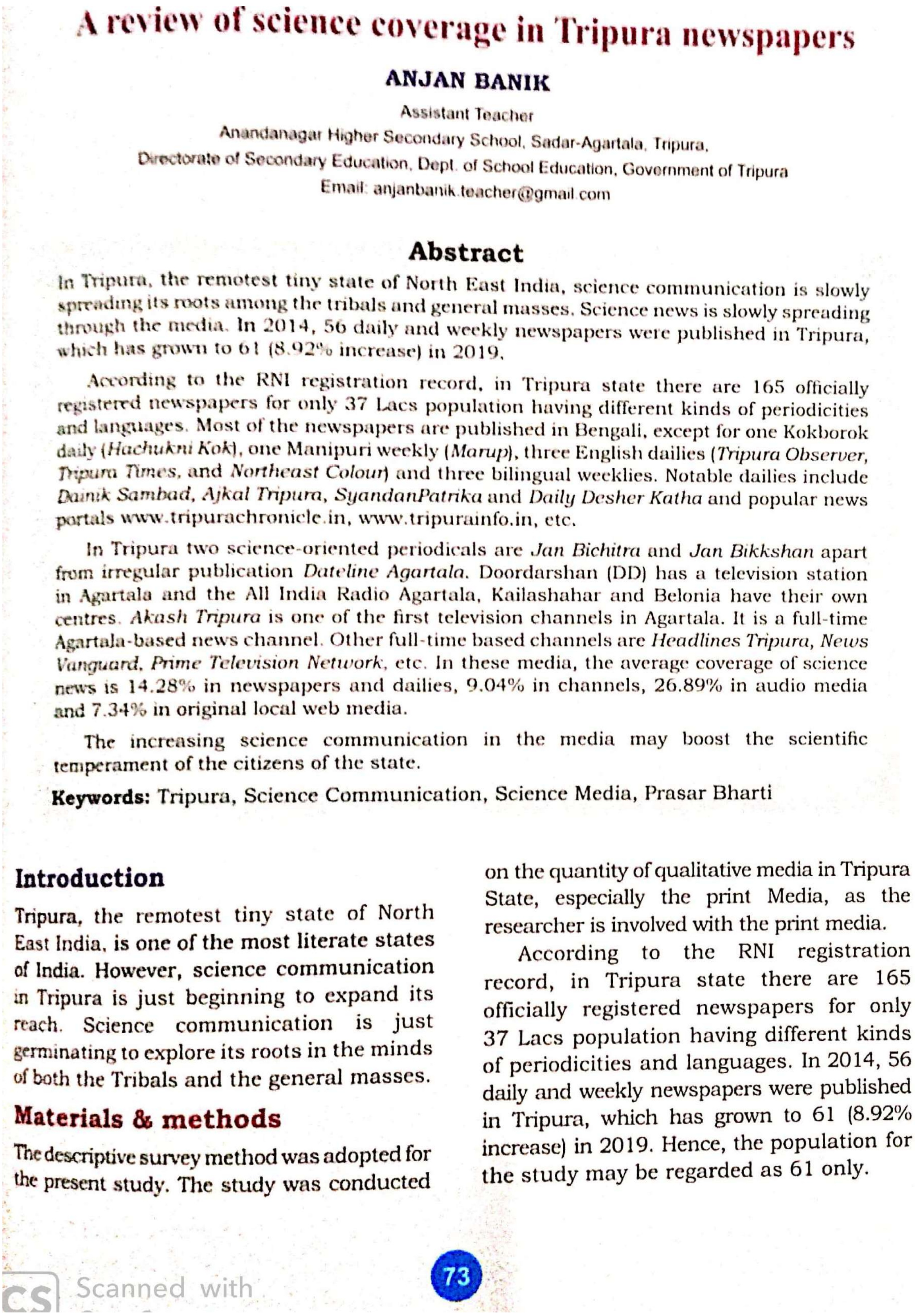

A review of science coverage in Tripura newspapers

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Abstract

In Tripura, the remotest tiny state of North East India, science communication is slowly spreading its roots among the tribals and general masses. Science news is slowly spreading through the media. In 2014, 56 daily and weekly newspapers were published in Tripura, which has grown to 61 (8.92% increase) in 2019.

According to the RNI registration record, in Tripura state there are 165 officially registered newspapers for only 37 Lacs population having different kinds of periodicities and languages. Most of the newspapers are published in Bengali, except for one Kokborok daily (*Hachukni Kok*), one Manipuri weekly (*Marup*), three English dailies (*Tripura Observer*, *Tripura Times*, and *Northeast Colour*) and three bilingual weeklies. Notable dailies include *Dainik Sambad*, *Ajkal Tripura*, *SyandanPatrika* and *Daily Desher Katha* and popular news portals www.tripurachronicle.in, www.tripurainfo.in, etc.

In Tripura two science-oriented periodicals are *Jan Bichitra* and *Jan Bikkshan* apart from irregular publication *Dateline Agartala*. Doordarshan (DD) has a television station in Agartala and the All India Radio Agartala, Kailashahar and Belonia have their own centres. *Akash Tripura* is one of the first television channels in Agartala. It is a full-time Agartala-based news channel. Other full-time based channels are *Headlines Tripura*, *News Vanguard*, *Prime Television Network*, etc. In these media, the average coverage of science news is 14.28% in newspapers and dailies, 9.04% in channels, 26.89% in audio media and 7.34% in original local web media.

The increasing science communication in the media may boost the scientific temperament of the citizens of the state.

Keywords: Tripura, Science Communication, Science Media, Prasar Bharti

Introduction

Tripura, the remotest tiny state of North East India, is one of the most literate states of India. However, science communication in Tripura is just beginning to expand its reach. Science communication is just germinating to explore its roots in the minds of both the Tribals and the general masses.

Materials & methods

The descriptive survey method was adopted for the present study. The study was conducted on the quantity of qualitative media in Tripura State, especially the print Media, as the researcher is involved with the print media.

According to the RNI registration record, in Tripura state there are 165 officially registered newspapers for only 37 Lacs population having different kinds of periodicities and languages. In 2014, 56 daily and weekly newspapers were published in Tripura, which has grown to 61 (8.92% increase) in 2019. Hence, the population for the study may be regarded as 61 only.

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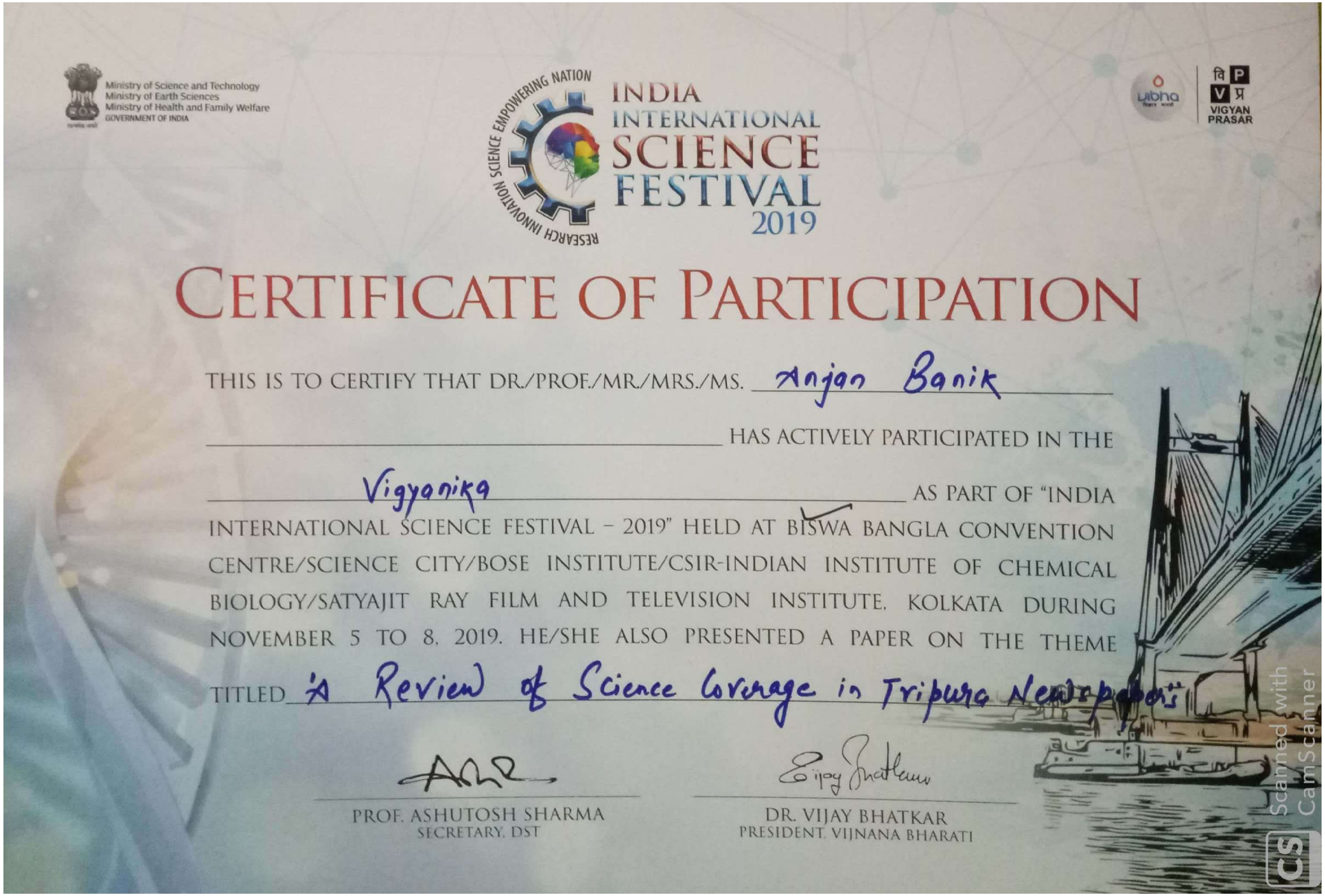

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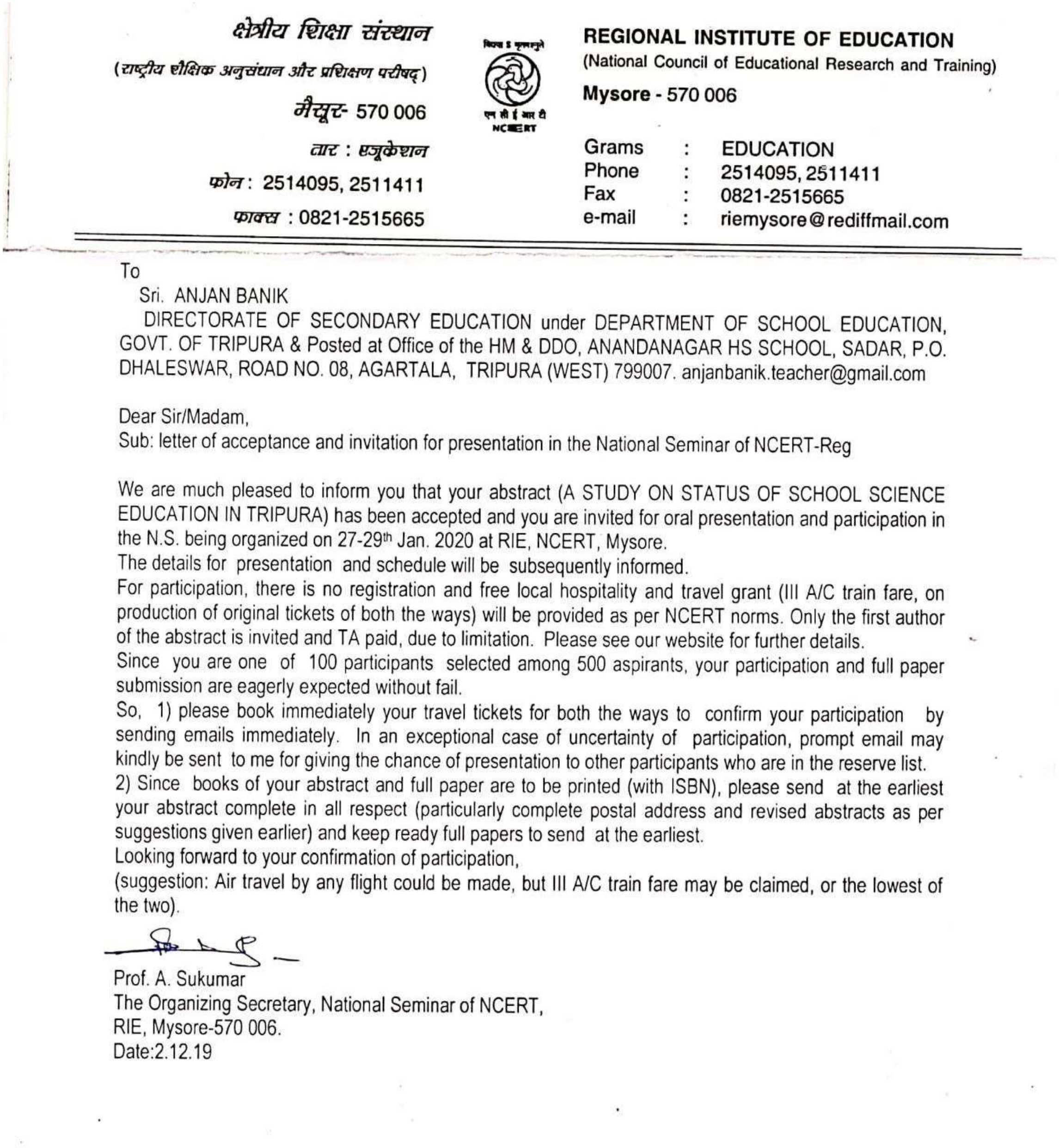

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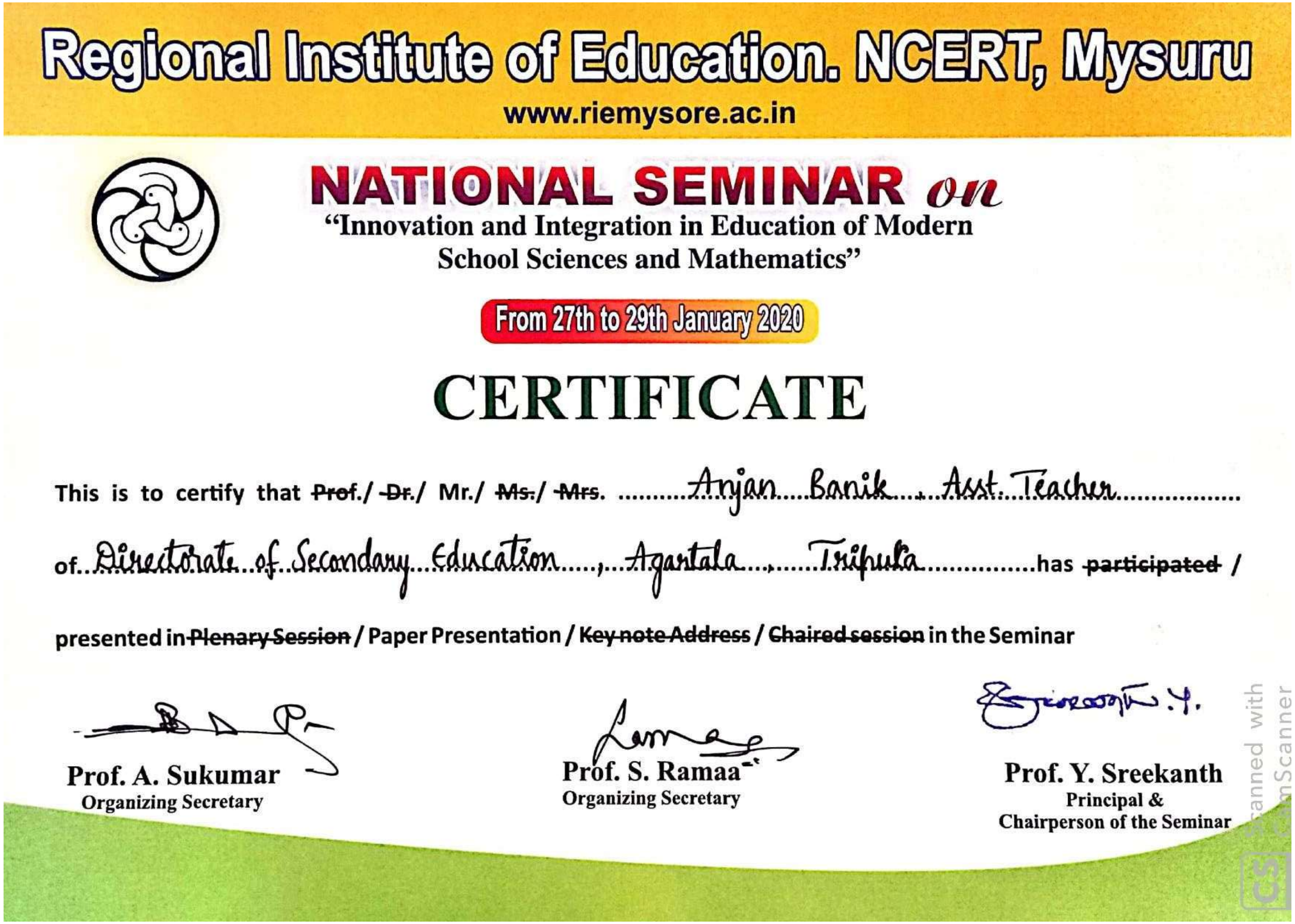

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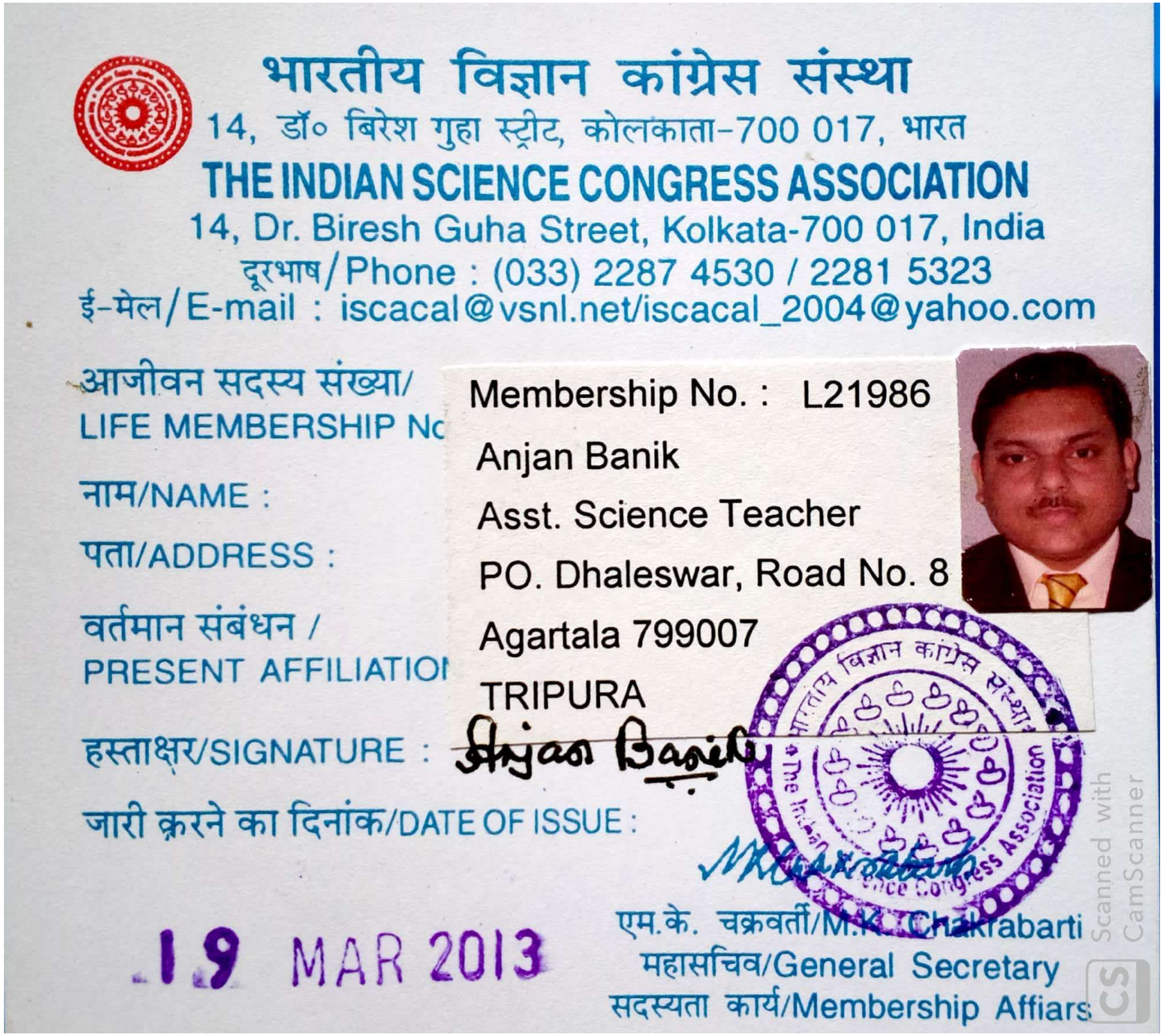

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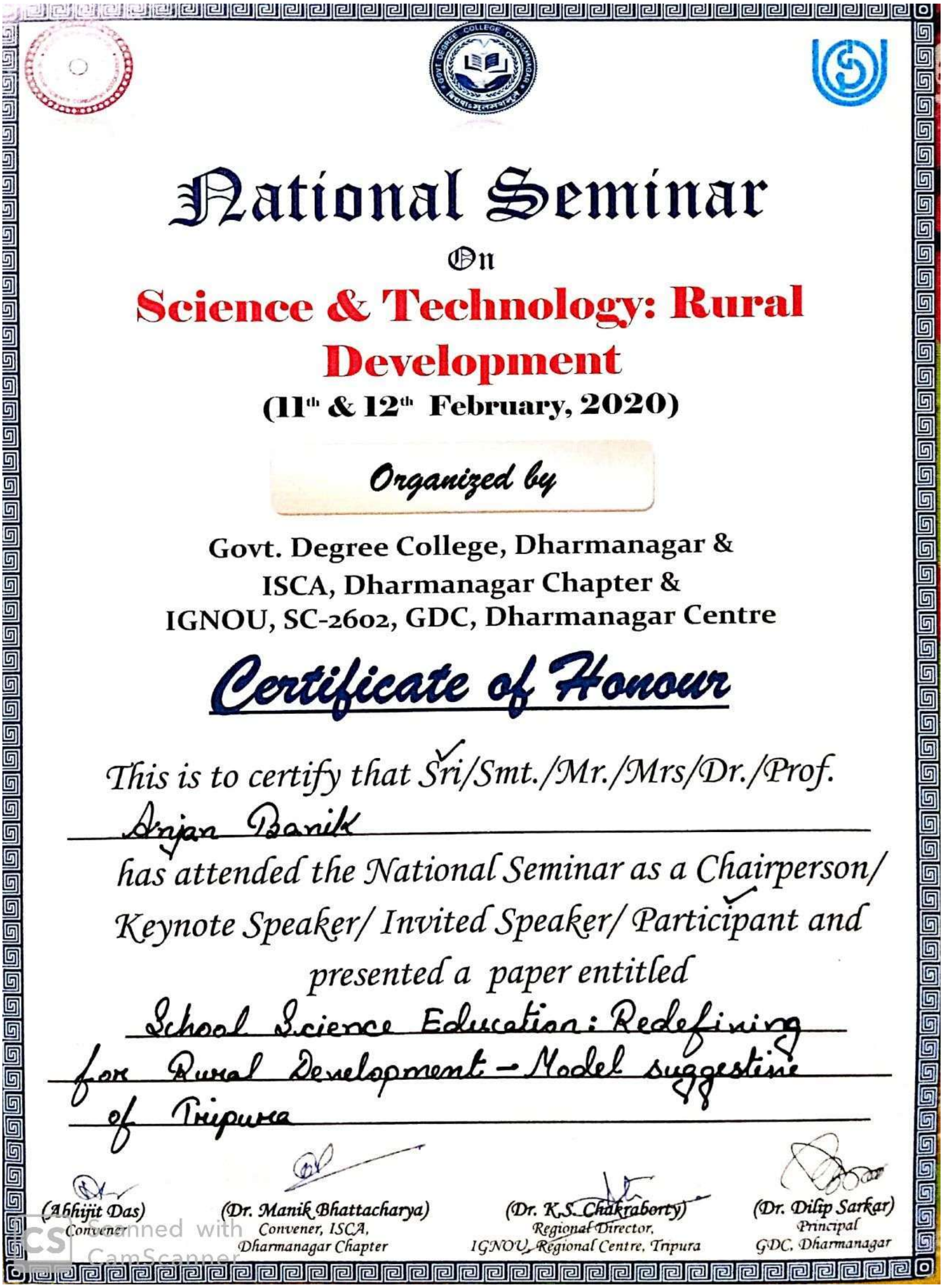

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